

The logo for the video game Pac-Man. It features the word "PAC" in large, stylized letters at the top, with "P" in green and "AC" in yellow. Below this, the three ghosts (Blinky, Pinky, and Inky) are shown in a row, appearing to be running or chasing. At the bottom, the word "MAN" is written in large, stylized letters, with "MA" in blue and "N" in yellow. The entire logo is set against a solid red background.

**A super
game to
type in**

3 Easy-to-enter CONTESTS

For ALL users of:
Electron, BBC, Amiga,
C64/128, Archimedes,
Spectrum, Atari ST,
PC, Amstrad CPC

No 10 May 1991
A Database Publication



9 770960 283003



PARENTS & TEACHERS!

Turn to Page 26 for ways of developing
the National Curriculum content
of Let's Compute!

Turn to Page 26 for ways of developing the National Curriculum content of Let's Compute!

A BIT ON THE SIDE

Public Domain Software

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AMIGA

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NEW!!!

Over the past few months we have wondered how parents felt about their children and indeed themselves joining a PD library and possibly receiving unsuitable material . . . i.e. Glamour Pics/Offensive language etc . . . so we decided to set up a subsidiary club where all the disks have been carefully vetted as suitable for all. It is simply going to be called THE JUNIOR PD CLUB and is for any age although the Club will be orientated towards the younger end. We have specially compiled a catalogue containing about 200 PD titles, 2 demos and a PD game. We also have some Pens and Badges with the club name on them, we will send a Pen FREE to all new members. For the under 16s we will send a Pen AND a Badge FREE of charge.

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and 39**

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GOTO 32

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GOTO 8

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GOTO 11

Tables
tester
GOTO 17



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Creative Editor Mark Nolan
Ace Cartoonist Mike Goldberg
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REGULARS

The Program Doctor	GOTO 17
Create an adventure	GOTO 19
Build a Database	GOTO 29
The Games Gang	GOTO 30
Logo Lowdown	GOTO 35
The Final Front-Ear	GOTO 38
Hi-Scores	GOTO 43
Prize winners	GOTO 43

Tubular display

Here's a simple program for the Spectrum. It draws a tube of circles that get bigger as it goes on.

```
10 BORDER 5:PAPER 7:INK 2:CLS
20 LET y=165
30 LET i=2
40 LET x=15
50 LET r=2
60 FOR l=1 TO 25
70 CIRCLE x,y,r
80 LET i=i-1
90 LET x=x-i/2
100 LET y=y+i/3
110 LET r=r-i/4
120 NEXT l
```

- Lee McShane (12),
Newton Aycliffe,
Co. Durham.

Noticeboard

If you have any tips for other readers, send them in. And if you have any questions about your computer or software just ask us. We'll try to answer them on the Noticeboard.



Let us know what you want to see in future issues. And if we use your letter or ideas we'll send you a *Let's Compute!* baseball hat! Send your letters to:

***Let's Compute!* Europa House,
Adlington Park, Macclesfield SK10 4NP
Remember to tell us your age.**

Revving up

I have made some changes to the car racing game. On my Amiga I added these lines:

```
91 FOR Z = 1 TO 2
92 SOUND 196,5,255,0
93 SOUND WAIT
94 SOUND RESUME
95 NEXT Z
```

I also found that by changing the 30 in Line 100 you can alter the length of the track.

By the way, if you find my sound too loud change the 255 in Line 92 to anything lower.

- Matthew Webster (10),
Moreton, Merseyside.

Lines 91 to 95 will only work on an Amiga. But your suggested change to the track length is OK for ALL computers.

Password problems

The March issue of *Let's Compute!* was very enjoyable. I especially liked the Program Doctor with his Password program.

But one day I forgot the password. So I tried to break in and I managed it. I just listed the program up to Line 70 and found the line that the password was on. Please can you tell me how to stop someone like my sister doing this?

- Peter Ford (10), Workingham, Berkshire.

You didn't say what sort of computer you have. We know a simple way to stop programs being listed on Acorn computers. That's printed below.

If any *Let's compute!* readers know ways of protecting programs on other computers let us know. We'll pin some to the noticeboard.

On Acorn computers try typing this program in:

```
10 REM SORRY IT WON'T LIST *****
20 PRINT "THE PROGRAM WORKS"
1000 REM *
```

LIST it and RUN it. It works just as you would expect. Now type:

```
?(PAGE+27)=21
?(TOP-3)=6
```

Again try LIST and RUN. It now RUNS, but it won't LIST.

board

Don't cheat

I have typed in and tried Nim from the April issue of *Let's Compute!* I discovered that you can win when there are three sticks in the pile and it's your go.

Take away 1.5 sticks and the computer loses. It is even possible when the computer starts. To stop this happening I changed every M to M%. This means that all the numbers you type in will be treated as whole numbers.

— Thomas Watts (11), New Malden, Surrey.

It's cheating to take parts of sticks! Your solution will work on most computers.

But we think an even better way is to tell the player to stop cheating. This line will do that on all home computers:

```
55 IF M<>INT(M) THEN PRINT "CHEAT!!! YOU CAN'T TAKE PART OF A STICK":GOTO 50
```

Any name will do!

On a recent survey, about 20 per cent of programmers used FRED as a password. Have you any idea why?

— Alex Waddell (10), Reading, Berks.

Programmers are often poor typists. As the letters FRED are in a square on the keyboard they can find them easily!

Do you want a problem page?

I think *Let's Compute!* is great. The programs are brill and Rom and Ram are a great laugh. The competitions are wicked.

But there is one thing that is missing. A problem page where people could write in for help.

— Daniel Dilley (13), Chester

Loads of people send letters asking us for help. We already answer as many as we can fit on the Noticeboard or in the Games Gang.

What do other readers think? Should we have a page specially to answer problems? Let us know what YOU think.

Race mods

I thought you might like to see my alterations for the car racing game in the March issue. These lines are for the C64 but they can easily be changed to suit other computers.

```
5 POKE 53280,24
7 POKE 53281,24
9 PRINT CHR$(158)
71 IF N=1 THEN P=8
72 IF N=2 THEN P=7
73 IF N=3 THEN P=6
74 IF N=4 THEN P=5
75 IF N=5 THEN P=4
76 IF N=6 THEN P=3
77 IF N=7 THEN P=2
78 IF N=8 THEN P=1
80 POKE 211,P(L):POKE 214,L:P:SYS 5873
2:PRINT C$(L)
```

Lines 5 to 9 change the whole screen orange and the writing yellow. The rest space the cars out according to the number entered.

— Michael Cavers, Duns, Berwickshire

The first three lines only work on a C64 or 128 so people with other computers should miss them out. Also, Line 80 is different for all computers.

Anyone wanting to use Michael's changes on a different make should just replace the L*2 in the published Line 80 with L*P.

Here's a programming tip. Loads of IF...THENs following each other can often be replaced by one line.

Notice that in Lines 71 to 78 P and N always add up to 9. This means that you can always find P by taking N away from 9.

So the eight lines can be replaced by:

```
75 N=9-P
```

Spectrum owners should type LET N=9-P. Also, Lines 71 to 78 of Michael's version need LET after the word THEN on a Spectrum.

KEYBOARD KAPERS



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SPECCY AND ARCHIE



The Micro Kid



GUESS THE LETTER



**LET'S MAKE
MONEY**

Part 6



Use Colin Markwell's game to raise more cash!

Guess the Letter is a game of chance. It's great for any fund raising event.

Type in the program - very carefully, **SAVE** it and then **RUN** it.

For fund raising at a school fete or any other occasion you must first **LOAD** the game. Make sure Caps Lock or Shift Lock is pressed. Then let people guess the letter which the computer will pick at random. They are given five chances. At the end they are told what they have won - if anything!

Change lines 310 to 330 to suit your needs. **G** is the number of goes you've had and **W\$** is the message given with that score. If you want more than five goes, change the 5 in Lines 90 and 100.

This game is educational as well. It's a fun way to learn the alphabet.

If you aren't using it for fundraising you can get rid of some messages. Just delete Lines 310 to 340.

Of course, the program can be modified in lots of ways to suit your own needs. For example, you can change the messages, add more or put some sounds in it.

Happy Fund raising!



This program and the description printed here are by Colin Markwell (13) from Ipswich. It's based on the old *Guess the number I'm thinking of* Game. Colin's idea of using letters adds a new twist to it.

IS THIS YOUR COMPUTER?

BBC, Electron and Archimedes

The program works as shown

AMIGA and PC(GW-Basic)

Change these lines:

```
50 RANDOMIZE TIMER
70 LET C=65+INT(RND*26)
```

ST(STOS)

Change these lines:

```
50 LET Z=RND(TIMER)
70 LET C=65+RND(25)
```

Amstrad CPC

Change these lines:

```
50 RANDOMIZE TIME
70 LET C=65+INT(RND*26)
```

Spectrum

Change these lines:

```
50 RANDOMIZE
70 LET C=65+INT(RND*26)
130 PRINT:LET Q=CODE(AS)
```

Commodore 64/128

Use capital letters.

Change these lines:

```
40 PRINT CHR$(147);
70 LET C=65+INT(RND(8)*26)
```

```
10 REM GUESS THE LETTER GAME!
20 REM By C.Markwell
30 REM (c) Let's Compute!
40 CLS
50 LET S=RND(-TIME):REM Randomise
60 PRINT:PRINT:PRINT"The Let's Comput
e! Guessing Game"
70 LET C=64+RND(26):REM Choose Letter
80 PRINT:PRINT "O.K. Start guessing."
90 FOR G=1 TO 5:REM 5 GOES
100 PRINT:PRINT"Chance number ";G;" ou
t of 5 guesses."
110 PRINT
120 GOSUB 370:PRINT AS:REM GET LETTER
130 PRINT:LET Q=ASC(AS)
140 IF Q<65 OR Q>90 THEN PRINT"That's
a silly guess!":GOTO 100
150 IF G=5 THEN GOTO 180
160 IF Q<C THEN PRINT"It's further on
in the alphabet"
170 IF Q>C THEN PRINT "It's earlier on
in the alphabet."
180 IF Q=C THEN PRINT "You've got it r
ight! Congratulations!":GOTO 280
190 NEXT G
200 PRINT:PRINT "Oh dear. You failed t
o guess the"
210 PRINT "Letter (Which was ";CHR$(C)
;";)"
220 PRINT:PRINT:PRINT"Do you want anot
her go (Y or N)?"
230 GOSUB 370:REM Get a Y or N
240 IF AS="Y" THEN RUN:REM Start Again
250 IF AS<>"N" THEN GOTO 230
260 STOP
270 REM Win!
280 PRINT:PRINT:PRINT"You've completed
the game in ";G;
290 IF G=1 THEN PRINT " Go!!!"
300 IF G>1 THEN PRINT " Goes."
310 IF G=5 OR G=4 THEN LET W$="your mone
y back."
320 IF G=3 OR G=2 THEN LET W$="twice as
much as you paid."
330 IF G=1 THEN LET W$="THE JACKPOT!"
340 PRINT:PRINT "You win ";W$
350 GOTO 220
360 REM Get a key
370 PRINT"ENTER A LETTER ";:INPUT AS
380 RETURN
```




The Let's Compute! expert takes a break from Basic and looks at the top games

Back to the Future III

This is the latest in the series based on the Back to the Future films. The first wasn't very successful – but things have improved since then.

You play the hero – Marty McFly – and you have to go back to the American Wild West as it was 100 years ago. There you must find and rescue your pal, Doc Brown.

To stop you is the charmingly named *Mad Dog*. He and his henchmen will stop at nothing to shoot you and the Doc.

The game has many different levels. Each more or less follows stages in the film. The graphics on each vary, but are generally of a high quality.

Sound is pretty good too, with some nice effects. But, a better use of tunes would have improved the game.

There are other things I don't like. The game is a bit of a mish-mash, as the different levels don't flow one to another.

Also, the plot's difficult to follow if you haven't seen the films. Added to this the gameplay in the later section is a bit too hard.

You can get Back to the Future III for the Atari ST, Amiga and PC for £24.95. The Spectrum, C64 and Amstrad CPC versions cost £9.95 on tape or £14.95 on disc.

Overall this is a good game, despite the few design problems. But if you ignore these it is fun, and a must for fans of the films.

Good fun!

7



Navy SEALS

Here's another movie tie-in. This time with the film released at the same time as the game.

The SEALS are not grey mammals found in the Atlantic. They are a crack selection of SAS men.

Your mission is to eliminate an arms base. In your way are numerous enemy troops who must be destroyed.

Navy SEALS is not just another game where you walk along and shoot everything in sight. There are lots of hazards to avoid too.

The best of these is an intelligent enemy. They don't just turn on you and fire as soon as you are on the screen.

They can only get to you if they see you. You can creep up on them from behind, or leap from above.

You've only five lives to last you over various levels. So the going is tough! This means your lives don't last long.

The graphics are superb – with

Play it Ag



Network



plenty of detail. The sprites are big. But this leads to the game slowing down. It can take a long long time to plod through the levels.

The other problem is the scrolling. It isn't as smooth as it could be. But the sound is fine, with nice chunky blasting effects!

Navy SEALs is from Ocean for the Atari ST, Amiga and PC. It costs £29.99.

This is a well presented and original game. But the lack of speed reduces enjoyment.



ain Sam 15



This compilation series for the BBC and Electron is now on its 15th edition. As usual there are four games – this time two old ones plus two new releases.

First in the line-up is **Last Ninja II**. This is the cream of the collection.

It features an interesting 3D look. And, despite the title, it isn't just a martial arts beat-'em-up. There are elements of searching and planning too.

Ricochet is the second re-release in the collection. Like Last Ninja II it originally cost £11.95.

The hero of the game is a squishy red ball, named Sprat. You must control him and help him out of a world of weird levels and platforms. There are five levels with nice graphics and effects – excellent!

The two new games are not so impressive. **Cyborg Warriors** is a scrolling blast-'em-up. The graphics are OK, but not superb. But it is a nice contrast to the others.

Finally we have **Network**. It's a level adventure game – a little similar to Ricochet. I was disappointed with it. Sam 15 is available from Superior Software for £11.95 on tape, £14.95 on 5.25in disc and £19.95 on 3.5in disc.

Apart from Network the compilation is very good. The other three games are varied and give good value for money.



Dick Tracy

The Dick Tracy game is based on the famous film and comic strip. He's an undercover cop in the New York of the 1920s. His job is to stop the big gangs with their evil gambling, drink and protection rackets.

Like several other new releases, the game is based on parts of the film. Various shots from it are seen as you play.

The aim is very simple. Walk along beating all the bad guys. At first you only have your fists – but you soon pick up a gun. Keep your eyes peeled for other useful bits and pieces too.

The best part is walking around the nice graphics. Apart from that I found it rather boring.

The graphics have been drawn in a special cartoon style. They work very well. But the choice of colours could have been better – they are mostly yellow and red. Neither do the screens scroll gently from one to another. The landscape clears and then a new scene appears.

But the sound is good. There are some nice tunes and some reasonable effects.

Dick Tracy costs £24.95 for the Atari ST, Amiga and PC. Spectrum, CPC and C64 versions are on their way.

The game has many good points, but they are beaten by the bad ones. Though there are better film tie-ins, there are worse ones too.

Gangland fans only



Rom's Recruits

Do you think YOU could review games? Each month Rom is looking for one new reviewer to help him out.

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Here are a few things to remember when you write:

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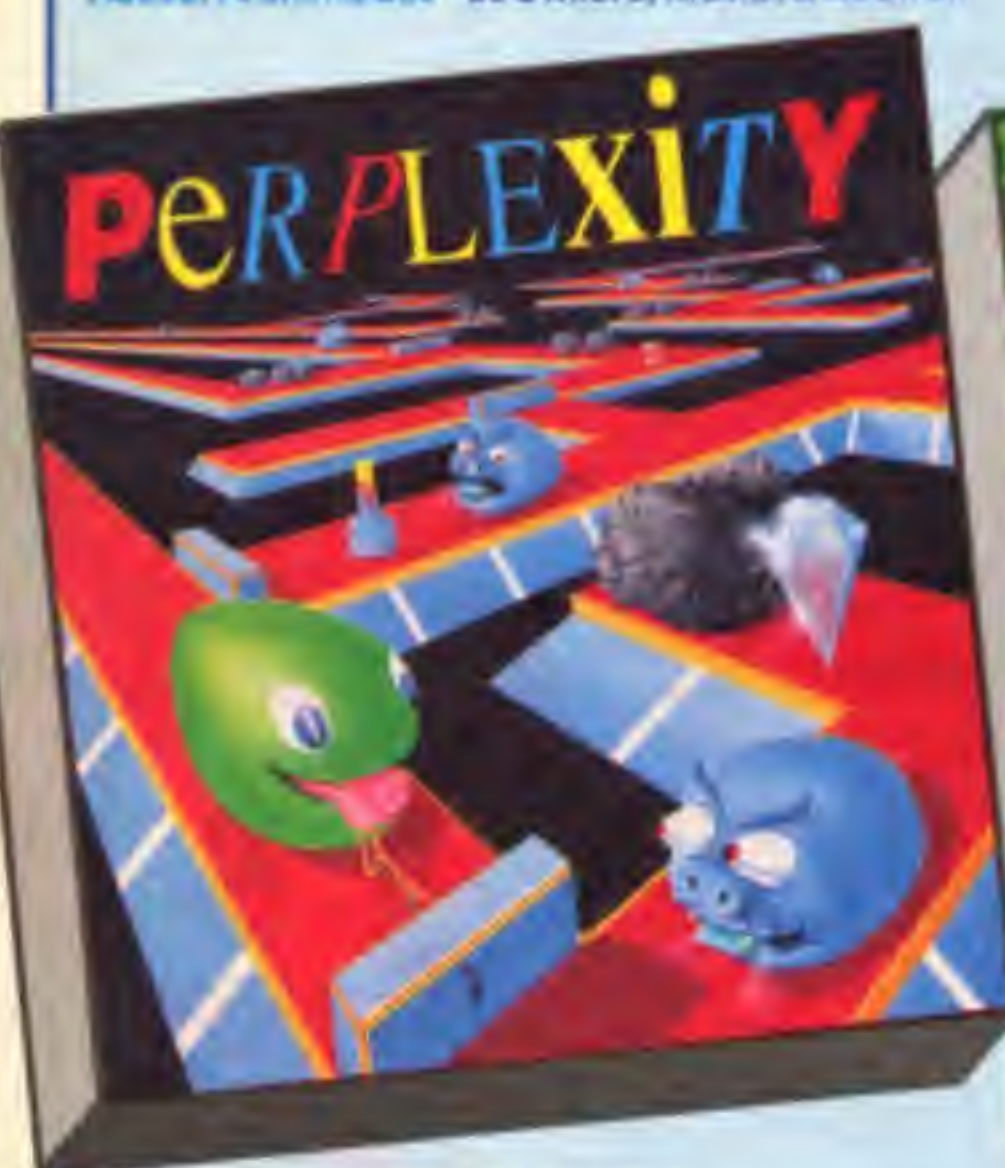
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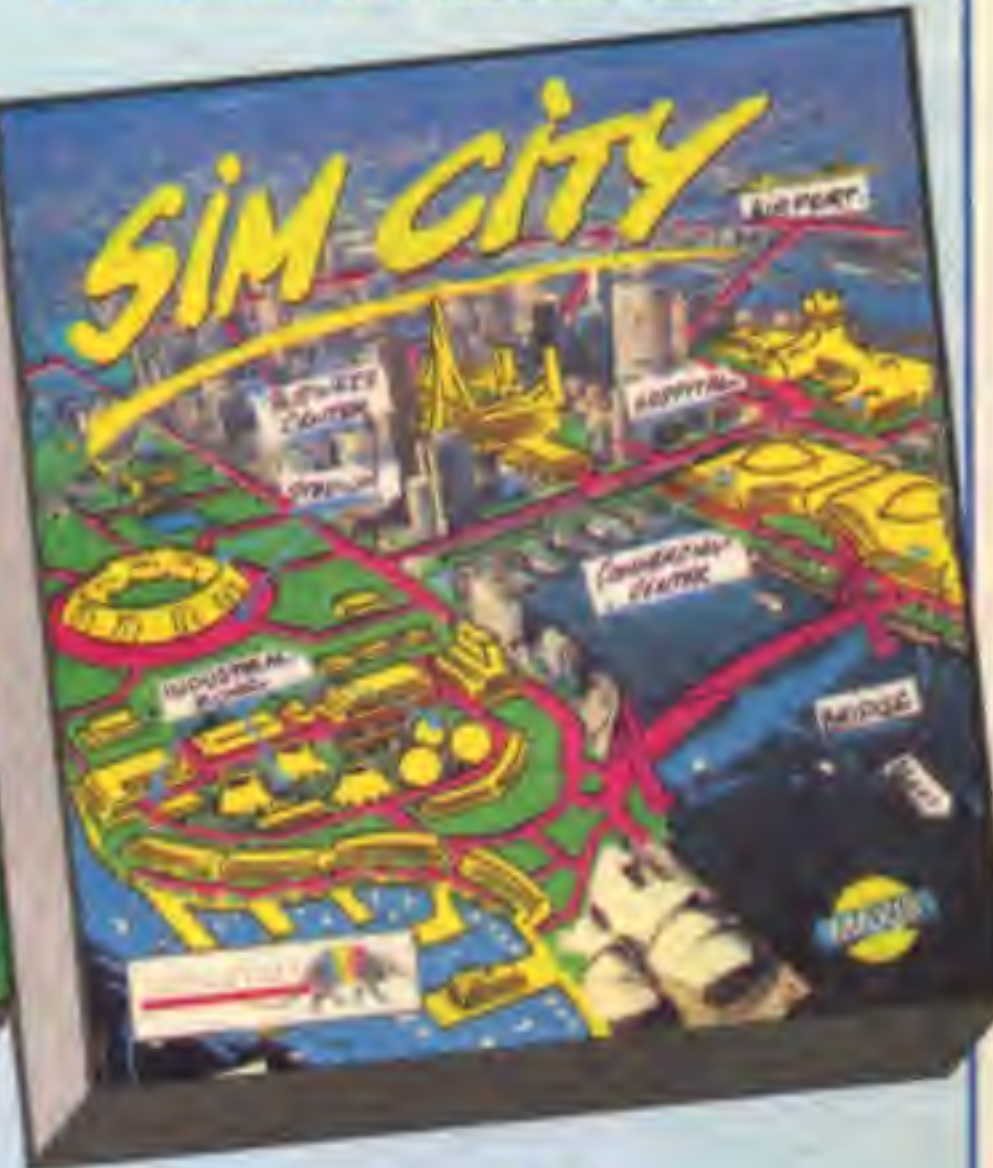
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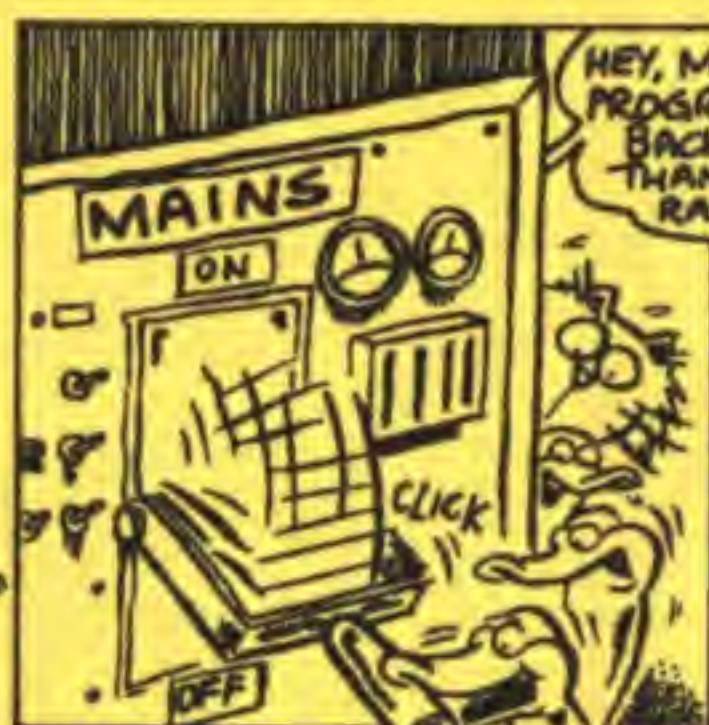
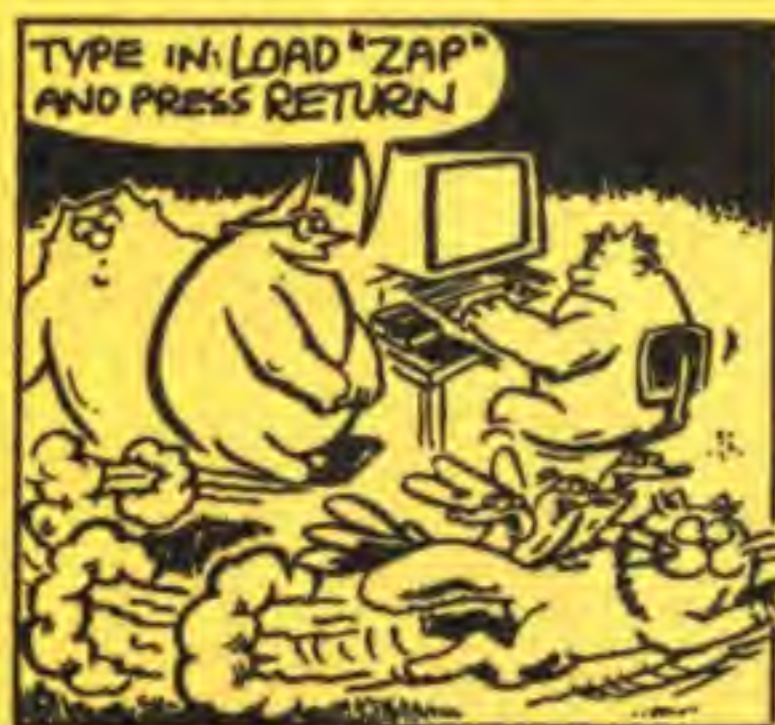
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Adv



Up to now we've created an adventure land-
scape that can be moved around at will.
Now let's move on to the next important part
of your adventure manager - placing the
objects.

Most adventures use objects. Remember the ones in
The Golden Crown in February's issue of *Let's Compute*?

There you had objects like a large bucket and the
cloak. You could pick them up and use them as part of
the game.

Now we are going to put objects into OUR adventure.
You can see them in the DATA in Lines 6000 to 6300. Add
these to your program.

Note that the last DATA line contains a rogue value. It
works like the one in the word list. This was explained in
the March issue.

Remember, using this system means you can easily
add things to your list. You don't have to tell the program
how many things there are in it.



Look at the DATA lines. You can see that
each object has a number in front of it. This
is the number of the room the object will
start in.

Some of the objects have zeros in front of
them. This just means they will not appear in
any room at the start. You can think of room zero as a
sort of store room for your objects when you're not using
them.

Notice that objects are not always things you can pick
up and use. They can do other things. For instance, the
red light in the air lock will eventually be changed to the
green light.

The objects and room numbers are in DATA lines. Your
computer now needs to READ them.

This is done in the same way as we did with the
words. Type in lines 1080 to 1140.



These are now part of the setting up rou-
tine. Every time you run the program the
objects will be put in the correct rooms.
The array **OBJECT\$** contains the descrip-
tions of the objects. **OBJROOM** holds the
room numbers. So **OBJECT\$(1)** contains laser rifle and
OBJROOM(1) contains 2, the room the laser starts in.

Like the room numbers, each object is numbered by its
place in the list. For example, the laser is number 1, the
space suit number 4 and the fixed cable number 14.

Next we want to display the objects as part of the

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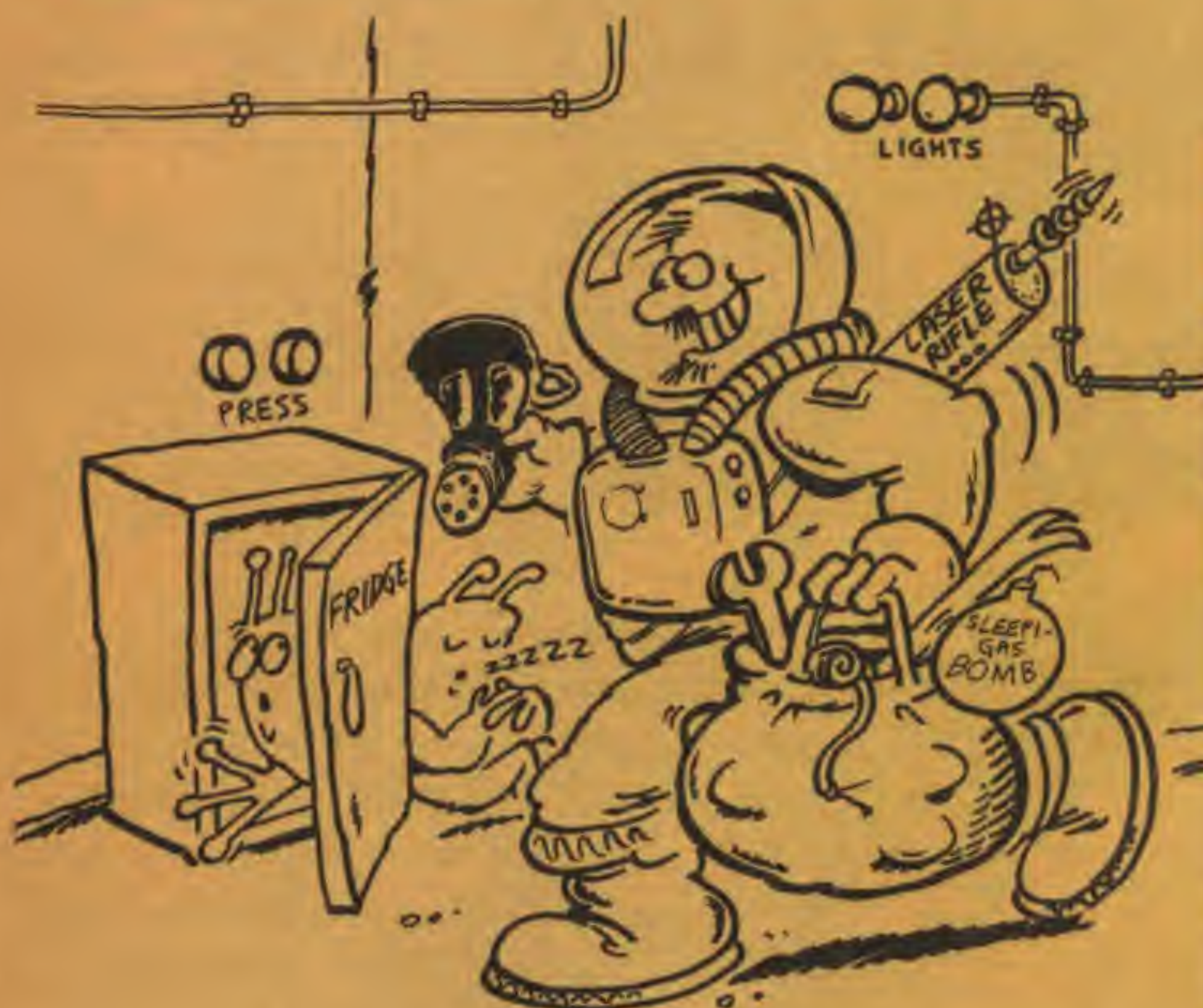
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ect of an

Add a new dimension to
your adventure by placing
things to pick up

PART 3

venture!



IS YOUR COMPUTER HERE?

This program works on a BBC, Archimedes, Electron, CPC, Atari ST(Stos), Amiga and PC(QW-Basic). It will not work on a C64/128 or Spectrum.

```

35 IF W(1)>=1 and W(1)<=10 GO SUB 271
0:FOR MORE THAN 10 MOVEMENT WORDS (NOT ROOMS AS STATED IN APRIL) CHANGE THE 10 IN THIS LINE.
1070 REM NOW SORT OUT THE OBJECTS - FIRST COUNT THEM
1080 RESTORE 6000
1085 0=0:REM THIS WILL BE THE NUMBER OF OBJECTS
1090 READX,X$:REM THESE VARIABLES ARE JUST FOR COUNTING
1100 IF X>-1 0=0+1:GOTO 1090:REM NOT THE END OF THE LIST?
1110 DIM OBJROOM(0):DIM OBJECTS(0)
1120 REM NOW PUT THE OBJECTS INTO AN ARRAY
1130 RESTORE 6000:REM BACK TO THE START OF THE OBJECT LIST
1140 FOR X=1 TO 0:READ OBJROOM(X),OBJECTS(X):NEXT
2040 REM NOW TELL US WHAT YOU CAN SEE
2050 PRINT:PRINT "You can see :";
2060 FOR X=1 TO 0
2070 IF OBJROOM(X)=ROOM PRINTTAB(14);OBJECTS(X)
2080 NEXT X:PRINT
5990 REM OBJECTS START HERE
6000 DATA 2,lazer rifle
6010 DATA 4,sleepy-gas bomb
6020 DATA 1,red button
6030 DATA 1,green button
6040 DATA 0,space suit
6050 DATA 19,spanner
6060 DATA 18,crow-bar
6070 DATA 8,red light
6080 DATA 0,green light
6090 DATA 13,hungry alien
6100 DATA 0,sleeping alien
6110 DATA 12,gas mask
6120 DATA 16, loose cable
6130 DATA 0,fixed cable
6300 DATA -1,X
    
```

room description. Lines 2050 to 2080 do this. So type them in.

The lines search the **OBJROOM** array. As they do they check if any of the room numbers match the one you are in. If they do the description of the object is printed underneath the room description.

Now try **RUN**ning the program. You'll see our objects in your adventure. Why not put in some of your own?

You could put teachers into classrooms, tools into sheds or dragons into caves. Just use your imagination and scatter the map with all sorts of things!

● **At the moment the objects are just things in the rooms. Next month we'll find out how to carry them around. Then they'll really become part of the adventure!**

A CHALLENGE

So far your program displays the objects in a room. This is fine as long as there are some objects there!

If there aren't it prints:

You can see :

Can you alter the display routine yourself? It shouldn't print anything at all if there are no objects in the room. Or perhaps you could make it print:

You can see : nothing interesting

When



No.4

the rain drops in

Have you got the
bottle to chart
the rainfall
with the Let's
Compute!
rain gauge?

...

**Pete's Projects are always simple to make.
But this month's is the easiest yet.**

**It's a rain gauge. And it's just made
from a plastic bottle and a ruler.**

**What's your computer got to do
with that? Well what better way
to keep records than use it?**

**The program we've given here
draws a barchart from your
readings. But you can use other
programs to process your
results.**

**You could, for example, feed
them into a spreadsheet – just
like the real weathermen do!**

**Once you've made the gauge
take readings at regular intervals –
say daily. Then you can compare
yours with the ones that are often
shown on TV.**



MAKING THE RAIN GAUGE

First you need an empty plastic bottle. It must have straight sides like the one in our picture.

Now cut the top part off to form a funnel. It's a good idea to get your parents to help with that.

Turn the funnel you have made upside down. Push it into the other part of the bottle to make your gauge.

Now tape a ruler to the side of the gauge. The zero of the ruler should be above any bumps or shapes at the bottom of the bottle.

Pour water into the gauge up to the zero mark on the ruler. It's now ready to use.

Put it in your garden. Try to find a fairly shaded place so the rain doesn't evaporate. Now it's just a matter waiting. When it rains the gauge will collect it. You can check the depth by just reading the ruler.

WHY USE A FUNNEL?

At first it may seem pointless having a funnel into the base. After all, rain would fall into the bottom half of a bottle anyway.

The purpose of the funnel is to stop the water in the gauge evaporating.

As an experiment, make another gauge without the funnel. Stand it in your garden next to the one that has one. Check if the readings from both are the same.

USING YOUR COMPUTER

If you want to convert your numbers into a barchart here's a program to do it. Type it in, SAVE it and RUN it.

You'll first be asked *How many readings?* The most you are allowed to type in is about 35 – the exact number depends on which type of computer you have.

Next you type in the readings. One after each question mark that appears.

The biggest number that will be correctly displayed is about 25. If you type a larger one the biggest bar that will fit will be

drawn. Once you've typed in all your readings your barchart will be drawn. If there's enough room a gap will be left between each bar.

The numbers up the side are automatically chosen so the bars are as tall as possible.

Note that, although this program is intended to be used with Pete's rain gauge it has other uses. With it you can draw barcharts of any numbers you want such as the how much money you spend each day.

```
10 REM PETE'S PROJECT BAR CHART
20 H=30:W=40:VDU23,255,255,255,255,255,2
55,255,255,255:CS=CHR$(255):MODE4
30 PRINT "HOW MANY READINGS?";:INPUT D
40 IF D>W-5 THEN PRINT "TOO BIG":GOTO 30
50 LET E=1:IF D<(W-5)/2 THEN LET E=2
60 DIM R(D):LET L=(W-D)/2
70 LET M=0:FOR I = 1 TO D
80 PRINT "READING ";I;:INPUT R(I)
90 IF R(I)>H-3 THEN LET R(I)=H-3
100 IF R(I)>M THEN LET M=R(I)
110 NEXT I
120 LET S=1:IF M<(H-4)/2 THEN LET S=0.5
130 IF M<(H-4)/4 THEN LET S=0.25
140 FOR J=1 TO D:LET R(I)=INT(R(I)*(1/S))
:NEXT I
150 CLS:PRINT
160 PRINT"THE LET'S COMPUTE! RAINFALL CHA
RT"
170 FOR I=H TO 4 STEP -4
180 LET X=L-2-D*(E-1):LET Y=I:LET Z$=STR$
(ABS(I-H)*S):GOSUB 260
190 NEXT I
200 FOR I=1 TO D
210 IF R(I)<=0 THEN GOTO 240
220 LET X=I+E+L-D*(E-1):LET Y=H-R(I):LET
Z$=CS:GOSUB 260
230 LET R(I)=R(I)-1:GOTO 210
240 NEXT I
250 PRINT:END
260 PRINT TAB(X,Y)Z$:RETURN
```

IS YOUR COMPUTER HERE?

BBC/Electron/Archimedes

The program works as shown.

Amiga

Change these lines:

```
20 LET H=20:LET W=80:LET CS=" ":COLOR 1
,2:CLS
220 LET X=I+E+L-D*(E-1):LET Y=H-R(I):LET
Z$=CS:COLOR,1:GOSUB 260
260 LOCATE Y+1,X+1:PRINT Z$:COLOR 1,2:RE
TURN
```

PC (GW-Basic)

Change these lines:

```
20 LET H=20:LET W=80:LET CS=CHR$(219):CL
S
260 LOCATE Y+1,X+1:PRINT Z$:RETURN
```

Amstrad CPC

Change these lines:

```
20 H=20:W=80:CS=CHR$(143):MODE 2
260 LOCATE X,Y:PRINT Z$:RETURN
```

ST(Stos)

Change these lines:

```
20 MODE 1:KEY OFF:CURS OFF:HIDE:H=20:W=
80:CS=" "
220 LET X=I+E+L-D*(E-1):LET Y=H-R(I):LET
Z$=CS:PAPER 15:GOSUB 260
260 LOCATE X,Y:PRINT Z$:PAPER 0:RETURN
```

Spectrum

Change these lines:

```
20 LET H=20:LET W=32:LET CS=CHR$(143):C
LS
250 PRINT:STOP
260 PRINT AT Y,X;Z$:RETURN
```

Commodore 64/128

Change these lines:

```
20 H=20:W=40:CS=CHR$(18)+ " ":PRINT CHR$(
147)
150 PRINT CHR$(147);:PRINT
260 POKE 211,X:POKE 214,Y:SYS 58732:P
RINT Z$:RETURN
```

NEXT MONTH:
Make Pete's nuclear
reactor puzzle

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Last month we said that it would be really useful to have a program that doubles your computer's memory. And we printed the program – it's shown again on the right.

We didn't actually say that this program doubles the memory. It WAS the April issue after all!

So you typed it in? Don't worry! It wasn't such a waste of time after all. You can now use it to have some fun with your pals.

At the bottom of this page we explain how the program works. By changing the DATA numbers starting at Line 100 you can make it print ANY message you like.

The numbers are called the Ascii codes of the letters. Every letter has a number to represent it. Most computer instruction books give a list of the letters and their numbers.

But as usual, *Let's Compute!* makes it easy. Here's a program to print the Ascii codes for you whenever you like:

```
10 INPUT A$:PRINT ASC(A$):GOTO 10
```

On a Spectrum use CODE in place of ASC.

You'll notice that there are a lot of 13s in our DATA. These make your computer start a new line of type.

Try other numbers in the range 0 to 255. For example 12. On most computers that clears the screen.

Note that the last number in the DATA must be 99. Line 30 checks for it. More DATA is read until it is found. You could change it to 999 if you want to use code 99 anywhere else.

You can also make the program *interactive*. That means someone else can type the codes in and find out the secret message.

To do that change Line 20 to:

```
20 LET M=M+1:INPUT L(M)
```

If you make this change, Lines 100 to 200 now do nothing. Take them out if you want.

When the program is run, just type in your numbers. Type each one after a question mark appears – don't forget to press Return each time.

When you have typed them all in type 99. Your message will be displayed.

You've now got the basis of a coding and a decoding program. And you can go further. You can make the code harder to crack.

For example, you can add one to each number. Then change line 70 to take it off automatically:

```
70 PRINT CHR$(L(T)-1);
```

● It's up to you to think of more sneaky tricks to make the code harder to crack.

That clever program wasn't all it seemed to be!

```
10 LET M=0:DIN L(100)
20 LET M=M+1:READ L(M)
30 IF L(M)<>99 THEN GOTO 20
40 LET T=M*2:REM ** DOUBLES IT!
50 FOR I=1 TO M-1
60 IF L(T)=13 THEN PRINT:GOTO 80
70 PRINT CHR$(L(T));
80 NEXT T
90 REM THE SECRET IS IN THE NUMBERS
100 DATA 13,73,84,32,73,83,32,73,77
110 DATA 80,79,83,83,73,66,76,69,32
120 DATA 84,79,32,87,82,73,84,69,32
130 DATA 65,13,80,82,79,71,82,65,77
140 DATA 32,84,79,32,68,79,85,66,76
150 DATA 69,32,84,72,69,32,77,69,77
160 DATA 79,82,89,46,13,89,79,85,32
170 DATA 72,65,86,69,32,66,69,69,78
180 DATA 32,84,82,73,67,75,69,68,46
190 DATA 13,65,80,82,73,76,32,70,79
200 DATA 79,76,33,13,13,99
```

Were YOU fooled?

HOW THE PROGRAM WORKS ...

Lines 10 to 30 read in all the numbers. They are stored in the computer memory locations L(1), L(2), L(3), and so on.

Line 40 does nothing. It was put there to make you think something was being doubled. Miss it out now.

Lines 50 to 80 print out the message.

Line 90 is a message for you. Your computer doesn't need it so you can miss it out if you want.

Lines 100 to 200 contain the numbers that will be printed as the message. Change them if you want. Remember, you must have a 99 as the last one.

But CAN memory be doubled?

It's impossible for any program to double the memory of a computer. Instead you need more memory chips.

But programs can sometimes be written to make it seem as if your computer has more memory. They are completely different for different kinds of computer.

Your computer reserves some of its memory for controlling disc drives and tape units. This is only needed for short periods.

For instance, say you want to play a game. Your computer uses some of its memory to work the tape or disc unit to load it. But once that's done it doesn't need it any more.

A program can be written so that the extra memory can be used for something else. It could be used to store the high score table.

So the useful memory can be extended by clever programming. But it can't be doubled. A short program like the one we printed last month couldn't possibly do it.

So, if you were fooled, watch out next April!


```

10 REM PACMAN
20 CLS:VDU 23:8202:0:0:0:0:FX11
30 DIM M$(18,17):DIM G(3,4):DIM G$(3)
:LET PWRC=20
40 LET PWRTIM=0:LET TMR=0:LET SC=0:LE
T L1=3:LET L2=3:GOSUB 980
50 GOSUB 1070
60 GOSUB 760:GOSUB 780:GOSUB 220
70 GOSUB 970:IF PWRTIM-TMR>0 THEN LET
TX=9:LET TY=8
80 IF PWRTIM-TMR<0 THEN LET TX=PX:LET
TY=PY
90 GOSUB 300
100 LET A$=STR$(SC):LET LSC=LEN(A$):LE
T Q=32-LSC:LET Z=1
110 GOSUB 940
120 GOSUB 220
130 LET Q=31:LET Z=3:LET A$=STR$(L1):G
OSUB 940
140 IF FOOD>0 AND L1=L2 THEN GOTO 60
150 IF L1<>L2 THEN LET L2=L2-1:GOSUB 1
070:GOSUB 1110
160 IF FOOD=0 THEN GOSUB 980
170 IF L1>0 THEN GOTO 50
180 GOSUB 950:IF K$<>" " THEN GOTO 180
190 LET Q=24:LET Z=10:LET A$="GAME OVE
R":GOSUB 940
200 LET Z=12:LET A$="PRESS ANY KEY":G0
SUB 940
210 GOTO 40
220 LET HIT=0:FOR L=1 TO 3
230 IF G(L,1)=PX AND G(L,2)=PY AND TMR
>PWRTIM AND G(L,4)=1 THEN LET HIT=1
240 IF G(L,1)=PX AND G(L,2)=PY AND TMR
<PWRTIM AND G(L,4)=2 THEN GOTO 260
250 GOTO 270
260 LET G(L,4)=3:LET G$(L)=CHR$(34):LE
T SC=SC+150
270 NEXT L
280 IF HIT=1 THEN LET L1=L1-1
290 RETURN
300 FOR L=1 TO 3
310 LET X=G(L,1):LET Y=G(L,2):LET GD=G
(L,3):LET GC=G(L,4)
320 LET Q=X:LET Z=Y:LET A$=M$(X,Y):GOS
UB 940
330 IF G(L,4)=3 THEN LET TX=9:LET TY=8
:IF X=9 AND Y=7 THEN LET GD=2:GOTO 350
340 GOSUB 450
350 IF GD=1 OR GD=3 THEN LET X=X+(GD-2
)
360 IF GD=0 OR GD=2 THEN LET Y=Y+(GD-1
)
370 LET XX=X:IF XX=1 THEN LET X=16
380 IF XX=17 THEN LET X=2
390 IF G(L,4)=3 AND G(L,1)=9 AND G(L,2
)=9 THEN LET G$(L)="*":LET GC=1
400 IF G(L,4)=2 AND TMR>PWRTIM THEN LE
T GC=1:LET G$(L)="*"
410 LET Q=X:LET Z=Y:LET A$=G$(L):GOSUB
940

```

```

420 LET G(L,1)=X:LET G(L,2)=Y:LET G(L,
3)=GD:LET G(L,4)=GC
430 NEXT L
440 RETURN
450 GOSUB 760:LET N=RND(6)
460 LET XX=-2:IF GD<2 THEN LET XX=2
470 LET FF=0:IF GD=1 OR GD=3 THEN LET
FF=1
480 IF FF=1 THEN IF M$(X+(GD-2),Y)="*"
AND US="*" AND DS="*" THEN LET GD=GD+XX:
RETURN
490 IF FF=0 THEN IF M$(X,Y+(GD-1))="*"
AND LS="*" AND RS="*" THEN LET GD=GD+XX:
RETURN
500 IF FF=1 AND US="*" AND DS="*" THEN
RETURN
510 IF FF=0 AND LS="*" AND RS="*" THEN
RETURN
520 IF GD=0 AND US="*" THEN GOSUB 640:
RETURN
530 IF GD=1 AND LS="*" THEN GOSUB 700:
RETURN
540 IF GD=2 AND DS="*" THEN GOSUB 640:
RETURN
550 IF GD=3 AND RS="*" THEN GOSUB 700:
RETURN
560 IF N>4 THEN RETURN
570 IF GD=1 OR GD=3 THEN GOSUB 610:RET
URN
580 IF LS="*" AND TX>X THEN LET GD=3:R
ETURN
590 IF RS="*" AND TX<X THEN LET GD=1
600 RETURN
610 IF US="*" AND TY>Y THEN LET GD=2:R
ETURN
620 IF DS="*" AND(TY<Y OR X=9) THEN LE
T GD=0
630 RETURN
640 IF LS="*" THEN LET GD=3:RETURN
650 IF RS="*" THEN LET GD=1:RETURN
660 IF TX>X AND N<5 THEN LET GD=3:RETU
RN
670 IF TX<X AND N<5 THEN LET GD=1:RET
URN
680 LET GD=3:IF N=5 THEN LET GD=1
690 RETURN
700 IF US="*" THEN LET GD=2:RETURN
710 IF DS="*" THEN LET GD=0:RETURN
720 IF TY>Y AND N<5 THEN LET GD=2:RETU
RN
730 IF TY<Y AND N<5 THEN LET GD=0:RETU
RN
740 LET GD=0:IF N=5 THEN LET GD=2
750 RETURN
760 LET OS=M$(X,Y):LET US=M$(X,Y-1):LE
T DS=M$(X,Y+1):LET LS=M$(X-1,Y)
770 LET RS=M$(X+1,Y):RETURN
780 GOSUB 950:IF K$<>" " THEN LET CS=K$
790 LET X=PX:LET Y=PY:GOSUB 760
800 LET Q=PX:LET Z=PY:LET A$=" ":GOSUB
940:LET M$(PX,PY)=" "

```

```

810 IF CS="A" AND US<>"*" THEN LET PY=
PY-1
820 IF CS="Z" AND DS<>"*" THEN LET PY=
PY+1
830 IF CS="N" AND LS<>"*" THEN LET PX=
PX-1
840 IF CS="M" AND RS<>"*" THEN LET PX=
PX+1
850 IF OS="." THEN LET FOOD=FOOD-1:LET
SC=SC+10
860 IF OS<>"+" THEN GOTO 900
870 LET FOOD=FOOD-1:LET SC=SC+100:LET
PWRTIM=TMR+PWRC
880 FOR L=1 TO 3:IF G$(L)="*" THEN LET
G$(L)="0":LET G(L,4)=2
890 NEXT L
900 LET XX=PX:IF XX=1 THEN LET PX=16
910 IF XX=17 THEN LET PX=2
920 LET Q=PX:LET Z=PY:LET A$="C":GOSUB
940
930 RETURN
940 PRINT TAB(Q,Z);A$;:RETURN
950 LET K$=INKEY$(0):RETURN
960 RETURN
970 LET TMR=TMR+1:RETURN
980 RESTORE
990 FOR A=1 TO 16
1000 READ A$:LET Q=1:LET Z=A:GOSUB 940
1010 FOR B=1 TO 17:LET M$(B,A)=MID$(A$,
B,1):NEXT B
1020 NEXT A
1030 LET Q=20:LET Z=1:LET A$="Score:
":GOSUB 940
1040 LET Z=3:LET A$="Lives:":GOSUB 940
1050 LET FOOD=127
1060 RETURN
1070 FOR L=1 TO 3:LET G(L,1)=L+7:LET G(
L,2)=9:LET G(L,3)=0:LET G(L,4)=1:LET G$
(L)="*":NEXT L
1080 LET PX=9:LET PY=13:LET X=PX:LET Y=
PY
1090 LET CS=" "
1100 RETURN
1110 FOR Z=1 TO 16:FOR Q=1 TO 17:LET A$
=M$(Q,Z):GOSUB 940:NEXT Q:NEXT Z:RETURN
1120 DATA "#####
1130 DATA "#+.....#.....+#"
1140 DATA "#.#.###.#.###.#.#"
1150 DATA "#.#.#...#...#.#.#"
1160 DATA "#.....#.#.....#"
1170 DATA "#.####.#.####.#"
1180 DATA "#.....#.....#"
1190 DATA "###.#.##.#.###"
1200 DATA "...#.#.#.#..."
1210 DATA "###.#.####.#.###"
1220 DATA "#.....#.....#"
1230 DATA "#.#.####.####.#.#"
1240 DATA "#.#...#.#...#.#"
1250 DATA "#.###.#.#.#.###.#"
1260 DATA "#+.....#.....+#"
1270 DATA "#####

```

IS YOUR COMPUTER HERE?

BBC and Electron

The program works as shown

Archimedes and BBC A3000

Change these lines:

```

940 TIME=0:PRINT TAB(Q,Z);A$;:REPEAT U
NTIL TIME>4:RETURN:REM Change the 4 to s
peed up or slow down.

```

Amiga and PC(GW-Basic)

Change these lines:

```

10 SCREEN 1:RANDOMIZE TIMER:CLS
450 GOSUB 760:LET N=INT(RND*6)
940 LOCATE Z+1,Q+1:PRINT A$:RETURN
950 LET K$=INKEY$:RETURN

```

ST(STOS)

Change these lines:

```

10 MODE 1:KEY OFF:CURS OFF:HIDE
450 GOSUB 760:LET N=RND(6)
940 LOCATE Q, Z:PRINT A$:RETURN
950 LET K$=INKEY$:RETURN

```

Commodore 64

Leave out all the words: LET

Change these lines:

```

10 PRINT CHR$(147);:X=RND(-TI)
450 GOSUB 760:LET N=INT(RND(0)*6+1)
940 POKE 211,Q+1:POKE 214,Z+1:SYS 5873
2:PRINT A$;:RETURN
950 GET K$:RETURN

```

Amstrad CPC

Change these lines:

```

10 CLS:RANDOMIZE TIME
450 GOSUB 760:LET N=INT(6*RND+1)
940 LOCATE Q+1,Z+1:PRINT A$:RETURN
950 LET K$=INKEY$:RETURN

```

Spectrum

Change these lines:

```

10 CLS:RANDOMIZE
450 GOSUB 760:LET N=INT(6*RND+1)
940 PRINT AT Z,Q;A$;:RETURN
950 LET K$=INKEY$:RETURN
1010 FOR B=1 TO 17:LET M$(B,A)=A$(B):NE
XT B

```


PAC

**David McLachlan
presents his own
version of one of
the all-time top
computer games**



MAN

The classic Space Invaders started life in pubs and arcades. It was a hit long before computers became popular.

Then along came another game which was to knock it for six.

It's name was Pacman. And it became an instant success - the very first chase-around-the-maze game. Over the years there have been many copies of the original idea.

This special *Let's Compute!* version will run on most home computers. The changes needed for the popular ones are given. Pacman is represented by a letter C. The ghosts are asterisks - (*).

When you pick up the special power pill - (+) - the ghosts become harmless. They show this by changing into a letter O.

While they are like this you can eat them. If you do they change into quotes - (") - and return to their den. They are then reborn and chase you again.

The rules of Pacman

If you're too young, too old or have been on another planet you may not have heard of Pacman.

Here's how to play it.

The object is to move your chomping ball-shaped man around the maze. You munch pills and bonus items as you go along.

While you're doing it, stay out of the way of three ghosts! They'll continuously harrass you. Contact with one means certain death.

Try to pick up a special power pill. There's one in each of the four corners of the maze. The ghosts will then become harmless.

They're now edible and worth points. Eat them quick! They soon turn back to normal.

Sound advice

There are lots of things you can do to make this into YOUR version of Pacman. You could add colour, use different shapes, add extra objects to pick up or put some sounds into the program. Try putting in a click sound each time a pill is eaten. You could also add an explosion each time Pacman is eaten by a ghost. An increasing tone while the ghosts are edible gives you an idea how long you've got left.

Try to put that in too!

Keys to use

Up	A
Down	Z
Left	N
Right	M

Make sure caps lock
or shift lock is pressed

CONTEST TIME

MORE NOISE FOR
LET'S COMPUTE!
CLUB MEMBERS



Sounds fantastic!

Have you ever wanted to make the rafters shake when you play your favourite game? Did you think that you would never be able to get louder sound effects from your computer?

Well, if you've got an Electron, BBC, Archimedes, ST, Amiga or CPC this is just what you've been waiting for. It's Siren Software's Sound Blaster. It consists of a small amplifier, a power supply, two loudspeakers and a pair of headphones - letting you make as much sound as you like without disturbing the household.

Sound Blaster is easily connected and there are two volume controls on the wedge shaped amplifier - one for each speaker. It costs £52.99 but there are three going as prizes to members of the Let's Compute! Club.

What to do

Simply answer the following four questions. If you have any problems look in an encyclopaedia or ask your music teacher. Then fill in the entry form and send it to us to arrive no later than March 29. Don't forget to put your name and membership number on the form.

THE QUESTIONS

- 1 What was Beethoven's first name?
- 2 Which dance is associated with Strauss?
- 3 Flamenco is a style of music from which country?
- 4 What type of instrument is a snare?

Entry Form

Name	Answers
Address	1
.....	2
.....	3
.....	4
Postcode Age	My computer is (please tick):
Membership Number	ST <input type="checkbox"/> CPC <input type="checkbox"/>
.....	Amiga <input type="checkbox"/> BBC <input type="checkbox"/>
.....	Electron <input type="checkbox"/> Archimedes <input type="checkbox"/>

Now send this to:
Sound Blaster Contest, Let's Compute, Europa House,
Adlington Park, Macclesfield SK10 4NP.

PARENTS & TEACHERS

Computing should be fun. The aim of Let's Compute! is to make sure that youngsters get as much pleasure as they can from their computers - while they learn at the same time.

Programming is part of the National Curriculum, and the simple games and other programs in Let's Compute! are an ideal starting point for learning what computing is all about.

Once the programs are typed in they can easily be modified by the youngsters themselves. They should be encouraged to add colour and sound, change the graphics, add a high score table and adapt the game in many other ways so that it reflects their own ideas and their own personality.

Investigation is another important element of the National Curriculum. Most of our pages are designed with this in mind and point children in the right direction to discover things for themselves. Below we explain what some of the articles are about and give ideas of further investigations that children should be encouraged to do for themselves.

ADVENTURES .. Page 19

Nothing is more satisfying than writing your own big program and seeing others enjoy using it. The Create an Adventure series shows children the easy way to write a complete adventure.

Apart from the fun and programming aspects of this article, it offers educational openings in several subjects. For example, by changing the map to a real place it can be used in Geography. Altering the words to a foreign language can make this program a great teaching aid for languages.

ROM AND RAM .. Page 11

Rom is trying to learn about computers and Ram is teaching him. In following their exploits children learn along with Rom.

This month they show Rom - Rom's nephew how to SAVE and LOAD computer programs.

SAFE SCIENTIST .. Page 24

The Safe Scientist lets children use their computer to simulate experiments which in real life are too difficult, dangerous or expensive.

This month the aim is to investigate magnetism. The program given is a simulation of two magnets coming together.

A National Curriculum attainment target is devoted to electricity and magnetism. The rule discovered from this program is one of the fundamental concepts.

It is also what Information Technology teachers call a computer model. This means that a real situation has been copied onto the computer.

This introduces us to another area of the National Curriculum, Information Technology Capability. That just really means being able to use a computer sensibly.

Children should be able to use a computer model to make predictions. The magnet program lets them do just that.

GUESS THE LETTER .. Page 7

Schools and clubs have always tried to raise extra cash at events like an Annual Fair. In the series we offer some ideas showing how computers can be used to help.

This month's program is based on a popular computer game where the computer thinks of a number and you have to guess what it is.

The Let's Compute! version is different! It uses letters instead of numbers. The article explains how this simple concept can produce some useful income.

The idea and program came from Colin Markwell, a 13 year old reader. If your child can write a program you think others would like to see make sure he or she sends it to us.

There are many ways children can enhance this program. They can make it a more exciting money-making attraction by adding colour sound, more messages and so on.

PETE'S PROJECT .. Page 20

In this series of articles computing and practical skills come together. This month the project is to make a rain gauge.

A short computer program is used to draw a bar chart of the readings. Children should be encouraged to feed the results into other software as well. For example, they can create a spreadsheet from them.

LOGO LOWDOWN .. Page 35

Many teachers prefer the Logo language to Basic. And our Logo Lowdown turtles aim to make it fun.

Children should try the programs given and see what happens. Then they should try to change them to do something slightly different. The graphics of Logo show the effect of the change as soon as the program is run. It's easy to learn enough Logo to draw some interesting shapes. And by combining our series with a little trial and error children will soon be creating amazing displays for themselves.

PROGRAM DOCTOR .. Page 17

Each month Doc deals with some of the most common mistakes that people make - either in the program structure itself or in the ideas behind what a program does.

This month the teacher pays another visit to the Doc. He helps him to improve last month's educational software.

Children can type in the short listing first, try it, then add the additional lines and see what difference they make.

While Doc has improved the teacher's program there's still a lot more that can be done. Children can try to further improve it themselves.

Were you fooled? .. Page 23

Last month we said it would be a good idea to have more computer memory. And we published a program. We didn't say the program actually gave more memory. It was an April Fool joke - but not a complete waste of time.

In this month's article we explain why a program just couldn't be written to do that job. Any child who typed it in should have learnt this lesson.

We also explain what the program really does and how it works by ASCII codes. We then show how it can be changed into a secret code program. Children should be encouraged to change the formula in the program to produce their own codes.

PACMAN .. Page 24

At first this may seem like just another game. But once the child has it running he or she should be encouraged to make it into their own game. Some ideas they could try:

- Add sounds
- Change the characters. They could try defining their own on most computers.



Passing an exam . . . applying for a job . . . whatever you want to do in life you need to be able to SPELL!

There's mounting alarm about the appalling standards of spelling among Britain's schoolchildren. MPs, teachers, parents and employers are all stressing the vital importance of being able to spell correctly.

Yet most homes have what could be the ideal means of teaching spelling – the computer.

Instead of zapping aliens it could be turned into the best weapon of all to deal a body blow to bad spelling. With the help of a brilliant new software package that not only makes practising spelling painless but also loads of fun as well.

FIVE ways to improve your spelling

In a Flash: Read the word as it flashes on the screen, then type it in. For practice runs, the word is left on the screen as it is typed.

Rocket: Hidden words have to be discovered in this hi-tech version of the old favourite Hangman. If they are guessed correctly the rocket will blast-off. Fail and all that's left is a load of scrap.

Lunar Buggy: Type fast for fun. The aim is to key in the word as it's pulled across the screen by the buggy. It has to be completed before the letters drop down a crater.

All Mixed Up: Jumbled letters have to be sorted out to find the scrambled word. To help beginners – and anyone else who is stuck – clues can be obtained at the press of a key.

Conveyor Belt: Words pass by on the screen and have to be remembered. Then they must be typed in – spelt correctly. This is a challenging test of both spelling and memory.

All the programs have several options for extra flexibility – like a timer with on/off option to add that extra challenge.

In addition to using the 5,000 words provided, parents – or children – can create their own word lists for using with SPELL! This makes the package ideal for practising those hard-to-learn words, or for "Learn these spellings" homework.

SPELL! is unique. It lets the user learn at his or her own pace. They can take as long as they like – or take on the computer in a high-speed challenge!

And this one package is ideal for everyone – with the lowest age group suitable for under-5s, while the more advanced words will stretch even the most able students.

It includes five different tests, each making use of more than 5,000 words – so much variety that you'll never get bored.



- 5 DIFFERENT TESTS
- OVER 5,000 WORDS
- FOR AGES 5 TO 15

SPELL! only costs £8.95. It is now available on disc and tape for six of the most popular home computers and can be ordered on the form below.



Please send me a SPELL! package for my computer
(Tick as appropriate)

I wish to pay by:

☐ Cheque or postal order payable to Database Publications

☐ Credit card No:

Exp. date

_____ / _____

☐ Compact/Archi/Elk (3.5" disc)

☐ BBC/Elk (5.25" 40 T)

☐ BBC/Elk (5.25" 80 T)

☐ BBC/Elk (tape)

☐ Amiga (disc)

☐ ST (disc)

☐ PC (3.5")

☐ PC (5.25")

3612

3610

3611

3617

3614

3613

3616

3615

Name _____

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Daytime phone number in case of queries _____

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PHONE ORDERS: 051-357 1275

JOIN OUR CLUB TODAY



Subscribe at the same time – and Save £2!

Here's YOUR chance to become a member of the most exclusive club in computing – and save money too!

If you become a subscriber to *Let's Compute!* by using the form below, you can also join the Club for just £4 (saving £2).

As soon as we've registered your name we'll send you a giant package of gifts to help you make the most of your computer.

In addition to your own Gold Membership Card you'll also receive lots of software on an action-packed disc or tape (don't forget to state which kind you require), PLUS ● notepad, ruler, pencil and rubber ● stickers ● stylish hat and badge ● an incredible £200 worth of money-saving vouchers! And that's not all! As a club member you'll be entitled to take part in exclusive competitions and special events with super prizes.

Make sure YOU don't miss out. Fill in the form below and send it today!



This is the BBC version – other versions will vary

(Should you prefer to buy Let's Compute! from your newsagent each month, you can still join the Club by paying the normal joining fee of £6. You can do this by filling in the appropriate part of the form below.)

YES PLEASE!
Tick as required

- ☐ 3101 Please send me the next 12 issues of *Let's Compute!* for the price of £14 (including postage and packing)
- ☐ 3112 I'd also like to become a founder member of the *Let's Compute!* Club for the special price of £4 (instead of the regular £6) – so please send me the bumper Club pack with my first issue.
- ☐ 3113 I'll order *Let's Compute!* from my newsagent, but I'd still like to join the Club and receive my bumper member's pack for £6.

I wish to pay by:

- ☐ Cheque payable to Database Publications
- ☐ Credit card No: _____ Exp. date _____

Please send my software in this format

- | | | | | | | |
|--|---|---|---|---|---|---|
| <input type="checkbox"/> Compact/Archi/Elk (3.5" disc)
3050 | <input type="checkbox"/> BBC/Elk (5.25" 40 T)
3051 | <input type="checkbox"/> BBC/Elk (5.25" 80 T)
3052 | <input type="checkbox"/> BBC/Elk (tape)
3053 | <input type="checkbox"/> Amiga (disc)
3055 | <input type="checkbox"/> CPC (disc)
3056 | <input type="checkbox"/> CPC (tape)
3057 |
| <input type="checkbox"/> Spectrum (tape)
3060 | <input type="checkbox"/> Spectrum (disc)
3061 | <input type="checkbox"/> C64/128 (disc)
3062 | <input type="checkbox"/> C64/128 (tape)
3063 | <input type="checkbox"/> ST (disc)
3054 | <input type="checkbox"/> PC (5.25")
3058 | <input type="checkbox"/> PC (3.5")
3059 |

Name _____

Signed _____

Address _____

Post code _____ Age _____

Daytime phone number in case of queries _____

TO: Database Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB

No stamp need if posted in UK

PHONE ORDERS: 051-357 1275

Part 8

BUILD YOUR OWN DATABASE

BUILD YOUR OWN DATABASE

BUILD YOUR OWN DATABASE

In his final article
Roland Waddilove
shows you how to
rub out your
mistakes

CHANGE the cards

Here it is: The last routine of the *Let's Compute!* database. Add it to the previous bits and you have a fully working mini-database!

This month's lines form another self contained subroutine. They start at Line 6000. What they do is let you to change what you have written on a card.

This is useful if you make a mistake and want to correct it. But that's not all!

Suppose you are using your database to store your friends' addresses. If one moves, the address will need changing.

Or you could be keeping a list of your videos or music cassettes on computer. If you wipe a tape and replace the recording with something else you need to change the information in your database.

LOAD the program that you've built up over the past few months. Then add the lines shown on the right. SAVE your new version and RUN it.

Type in a few cards so you can check the new bit. Now, to change a card just choose option 6 from the menu. Follow the instructions that will be printed on your screen and you can easily modify your data.

Your *Let's Compute!* database is now complete. But that doesn't mean you have to stop tweaking it. There are lots of improvements and new features you can add.

The idea is to use this program as a framework and create your own customised database.

HERE'S HOW IT WORKS

The information on the cards is stored in an array called *C\$(255)*. Each card is five lines long. If nothing has been written on a card the first line is simply an asterisk (*).

So Line 6020 checks for an asterisk and jumps over most of the lines in the subroutine if it finds one. If there is an asterisk nothing has been typed in so there's nothing to change!

If the card has been written on it is printed on the screen. The computer then asks if you want to change the information shown. If you say No, the program jumps over a bit of code and looks for the next card. But if you answer yes the program asks you which line of the card you would like to alter.

WARNING: Be careful what you enter

here. The program doesn't check if the number you have typed makes sense. If you type in something silly you might change what's been written on a completely different card.

Line 6110 is the one that asks which line you want to change. Then Line 6120 prints what's already there and 6130 give you the chance to type in a new one. The new line is stored in the array and the program continues with the next card.

It's a very simple system, but it works. You could try modifying the subroutine so that you can alter another line on the card at the same time. At the moment you can only change one. It's not a difficult problem to solve, but it's one I'll leave up to you!

CARD INDEX DATABASE

1. Load a box of cards
2. Save a box of cards
3. Read/search for a card
4. Write on a new card
5. Throw away old cards
6. Change something on a card
7. Print the cards
8. Sort the cards into order
9. Stop the program

Cards free=45/Cards used=6

What do you want to do?

Please type in a number (1- 9)

Change the cards program

```
6000 REM ===== Change card =====
6010 X=1
6020 IF C$(X)="" THEN GOTO 6150
6030 CLS
6040 FOR Y=0 TO 4
6050 PRINT "Line";Y+1;":";C$(X+Y)
6060 NEXT Y
6070 PRINT
6080 INPUT "Change this card (Y or N)";K$
6090 IF K$<>"Y" AND K$<>"y" THEN GOTO 6150
6100 PRINT
6110 INPUT "Which line";Y
6120 PRINT "Line";Y;":";
6130 INPUT T$
6140 C$(X+Y-1)=T$
6150 X=X+5
6160 IF X<255 THEN GOTO 6020
6170 RETURN
```

This
program
works on
all home
micros

IS THIS YOUR COMPUTER?

**Archimedes, Electron,
BBC, Atari ST(Stos),
Amiga(Amos), PC(GW-Basic)**

The program works as shown.

Spectrum

Change this line:

```
6020 IF C$(X)=B$ THEN GOTO 6150
```

Amstrad CPC

In the January issue, Line 2080 -
which saves the cards - should have
been:

```
2080 WRITE #9,C$(X)
```

Commodore 64/128

Change or add these lines:

```
6030 PRINT CHR$(147);
6130 T$="":INPUT T$
6135 IF T$="" THEN T$=""
```


The Games Gang

Schwarzenegger Simulators

Fans of Arnold Schwarzenegger will soon have another game to add to their collection. Ocean have announced that they've got the licence for the big man's forthcoming movie - *Terminator 2*.

He repeats his role as a killer cyborg trained in death and brutal destruction.

There's no news yet as to exactly what the game will be like. But it should be hitting the shops in the autumn.

Meanwhile, watch out for another Arnie sequel: *Predator 2* from Mirrorsoft.

Reflections

Did you miss some of Mirrorsoft's best games the first time around? Now's your chance to catch them again at a bargain price.

The company is launching its own budget label called Mirror Image. Some of the first games to be released include the Cinemaware titles **Defender of the Crown** and **Rocket Ranger**.

Plans to release the Bitmap Brothers' fab future sports simulator **Speedball** and Rainbird's classic **Carrier Command** are also in the pipeline.

In the System

Looking for a bargain? System 3 are about to release four of their best 8-bit games on one compilation - and for only £14.99.

The games you get are **Vendetta** - an arcade adventure with a bit of driving thrown in, **Flimbo's Quest** - a cute platform game **Ninja Remix** - a revised version of the excellent Last Ninja, and **Myth** - one of the best 8-bit platform adventures around.

It will soon be available for the Amstrad CPC, C64 and Spectrum. Tapes will cost £14.99 and the disc versions will be £19.99.

Pam's Passwords



Lee McShane (12) from Woodham Village has sent a Spectrum Password. It's for **Freddy** - Part 2. The password is 097563.

If you just can't make it through the Amiga version of *Prophecy - The Viking Child* help is at hand. To progress a little more with this nifty platform game try the following codes:

Level	Password
1	IMAGITEC
2	JOJO SM
3	GUSTAVUS
4	NINJADL

Tomas Walder (12) from Bromley has help for people stuck on **Bug Hunter 2 - Bug Hunter in Space**. If you've got as far as the last level but no further, then type in the password POSDNUOS on your A3000 or Archimedes.



BBC owners stuck on **Pipemania** can thank Daniel Gardner from Thatchom for the passwords to this superb game:

Level	Password
5	Schnapps
9	Symmetry
13	Triptych
17	Skylarks
21	Rhythmic
25	Flyblown
29	Knightly
33	Gymnasts



Take the Driving Wheel

Following along the tracks of *E-Type* and *Powerband*, Fourth Dimension have come up with another great car racing game.

It's for the Archimedes and called *Saloon Cars*. You take the place of an amateur racing driver with an Astra GTE.

If you can prove yourself you can move up the ranks to a BMW M3 and Sierra Cosworth. Some really good graphics of Silverstone and car interiors add to the game.

Saloon Cars will be available in the shops in June for £24.95.



Cyberbrain Goes Crazy

Remember **Carrier Command**? It was one of the most complicated 3D games of all when it first hit the shelves a couple of years ago.

It should be out on budget soon so check it out if you missed it. Now two of its programmers have got together to produce something even bigger.

Cybercon III is set in a huge rambling 3D world containing 400 completely different rooms. There are also 160 different objects.

The story's all about a giant computer that's gone mad. The only way to switch it off is to go inside its giant housing. There you must brave the security robots and find the four pieces of the key. They lead to the computer's brain-stem.

The gameplay and graphics are great. And it's easy to get caught up in the exciting atmosphere.

If you've got an Atari ST, an Amiga or a PC and you like 3D adventures you should snap this one up.

CHARLIE'S CHEATS!

Do you have problems with **Golden Axe** on the C64? Sick of fighting? Then skip those boring levels. How? I'll show you!

Start playing and press RUN/STOP, then press the semi-colon key to skip to the next stage.

Simple, isn't it?

After playing **Batman the Movie** on his Amiga, Jonathan Oxford (10) from Langport has found a way to skip levels. Type Jammmm as Batman and the Joker appear and keep the M key held down until the screen turns upside down. If you press the F10 key you'll be able to skip levels.

Are the four **Mutant Hero Turtles** giving you a hard time on your Atari ST? Then here are some ways to improve your fortunes.

For infinite energy, wait until you're asked for a code. Type in 8859, then 1506 and finally the proper code using the official code sheet.

Here's one for the more adventurous of you. If you're having problems with **Indiana Jones and the Last Crusade** on the C64, Peter Armann (11) from Thurmanston has the solution.

Press the keys SHFI while you are on the title screen. The words Cheat Mode On will appear. When you are on levels 1, 2 or 3 pressing any key between 1 and 5 will take you to different places on that level.

Pressing 6 will take you to the next level. But pressing 6 on level 4 will take you to the end of the game.

Simon Brambley (11) from Grimsby has been working really hard on **Gauntlet II** on his Atari ST. If you press P the game will pause. If you then wait for five minutes and press fire all the walls will turn to exits.

Richard Irons wrote to us with a cheat for **Shadow of the Beast 2** on the Amiga. When you start to play walk right until you come across the first man.

Press A and when your computer prints *Ask about what?* you reply *Ten pints*. The computer will respond with *This one's for you Roger! Cheat mode now active*.

You'll find that you now have infinite energy.



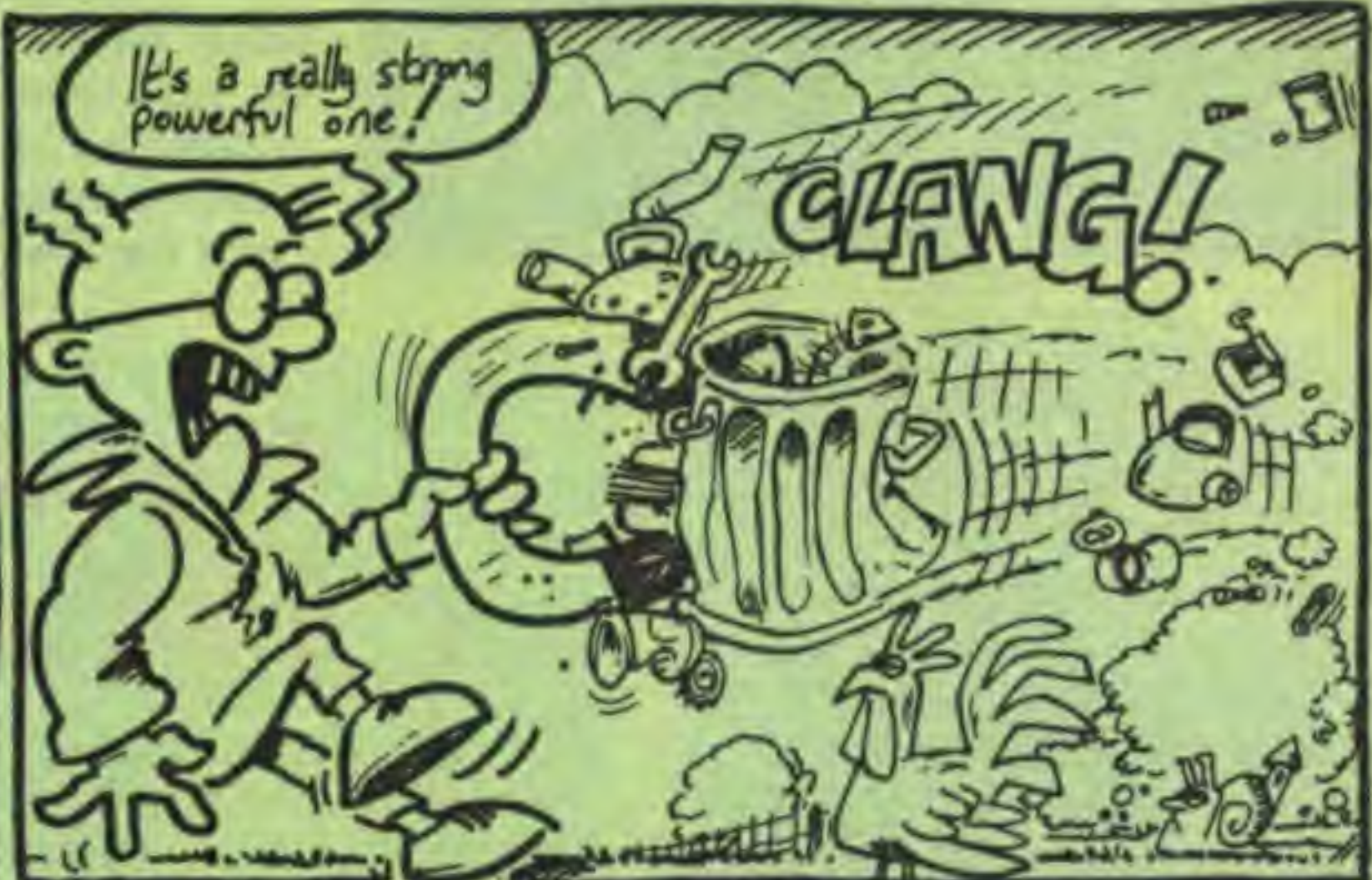
COLLECTION TIME
7:30 AM
1:00 PM

If you've any hints, pokes or cheats you'd like us to print send them to:

Let's Compute!
Europa House,
Adlington Park,
Macclesfield
SK10 4NP.



The Safe



Scientist

ATTRACT OR REPEL

The Safe Scientist
plays with a magnetic model

Magnets attract some metal objects. But what happens if two magnets are put near each other? The program here is a simple investigation. It lets you find out just what DOES happen. Magnets have two ends. One is called the north pole and the other is the south pole. We need to find out what happens when poles are put near each other.

This computer simulation lets you do it without having to mess about with real magnets.

When you RUN the program two magnets are shown. They have red and blue ends - just like real ones.

Press the spacebar and one magnet will move. It will stop when it is in line with the other. That will move according to the laws of magnetism.

You can do the experiment as many times as you like by just pressing the spacebar. The poles of the magnets are arranged in a random way each time.

Try to come up with a rule. This means that you will be able to say what will happen BEFORE you run the program.

```
10 REM MAGNETS
20 REM THE SAFE SCIENTIST
30 DIM T(3):FOR I=1 TO 3:READ T(I):NE
XT I:LET SS="" :REM 10 SPACES
40 MODE1:VDU23;8202;0;0;0;0;VDU19,2,
4;0;
50 LET MAG1=RND(2):LET MAG2=RND(2)
60 LET Y=10
70 IF MAG1=1 THEN LET X=7:GOSUB 440:L
ET X=12:GOSUB 450
80 IF MAG1=2 THEN LET X=7:GOSUB 460:L
ET X=12:GOSUB 470
90 LET Y=3
100 IF MAG2=2 THEN LET X=22:GOSUB 440:
LET X=27:GOSUB 450
110 IF MAG2=1 THEN LET X=22:GOSUB 460:
LET X=27:GOSUB 470
120 LET X=14:LET Y=18:LET AS="PRESS SP
ACE":GOSUB 480
130 LET X=9:LET Y=20:LET AS="TO MOVE R
IGHT MAGNET":GOSUB 480
140 GOSUB 490
150 LET C=1:GOSUB 1000:LET X=14:LET Y=
18:LET AS=SS+" ":GOSUB 480
160 LET X=9:LET Y=20:LET AS=SS+SS:GOSUB
480
170 FOR N=3 TO 10:LET Y=N
180 IF MAG2=2 THEN LET X=22:GOSUB 440:
LET X=27:GOSUB 450
190 IF MAG2=1 THEN LET X=22:GOSUB 460:
LET X=27:GOSUB 470
200 LET C=1:GOSUB 1000:LET X=22:LET Y=
N-1:LET AS=SS:GOSUB 480
210 GOSUB 500
220 NEXT N
230 IF MAG1=MAG2 THEN GOSUB 280
240 IF MAG1<>MAG2 THEN GOSUB 360
250 LET X=14:LET Y=20:LET AS="PRESS SP
ACE":GOSUB 480
260 GOSUB 490
270 GOTO 40
280 FOR N = 7 TO 0 STEP -1:LET Y=10
290 IF MAG1=1 THEN LET X=N:GOSUB 440:L
ET X=N+5:GOSUB 450
300 IF MAG1=2 THEN LET X=N:GOSUB 460:L
ET X=N+5:GOSUB 470
310 LET C=1:GOSUB 1000:LET X=N+10:LET
Y=10:LET AS="" :GOSUB 480
320 GOSUB 500
330 NEXT N
340 LET X=15:LET Y=18:LET AS="REPULSIO
N":GOSUB 480
350 RETURN
360 FOR N = 7 TO 12:LET Y=10
370 IF MAG1=1 THEN LET X=N:GOSUB 440:L
ET X=N+5:GOSUB 450
380 IF MAG1=2 THEN LET X=N:GOSUB 460:L
ET X=N+5:GOSUB 470
390 LET C=1:GOSUB 1000:LET X=N-1:LET Y
=10:LET AS="" :GOSUB 480
400 GOSUB 500
410 NEXT N
420 LET X=15:LET Y=18:LET AS="ATTRACTI
ON":GOSUB 480
430 RETURN
440 LET C=2:GOSUB 1000:LET AS="N " :
GOSUB 480:RETURN
450 LET C=3:GOSUB 1000:LET AS=" " S":
GOSUB 480:RETURN
460 LET C=3:GOSUB 1000:LET AS="S " :
GOSUB 480:RETURN
470 LET C=2:GOSUB 1000:LET AS=" " N":
GOSUB 480:RETURN
480 PRINT TAB(X,Y);AS:RETURN
490 REPEAT UNTIL INKEY=-99:RETURN
500 FOR D = 1 TO 200:NEXT D:RETURN
1000 COLOUR T(C):RETURN
1010 DATA 128,129,130
```

IS YOUR COMPUTER HERE?

BBC, Electron, Archimedes
The program works as shown:

Amiga

Change these lines:

```
40 PALETTE 3,,93,,2,0:COLOR 1,2:CLS
50 LET MAG1=INT(RND*2)+1:LET MAG2=INT
(RND*2)+1
480 LOCATE Y+1,X+1:PRINT AS:RETURN
490 WHILE INKEYS<>" ":WEND:RETURN
1000 COLOR,T(C):RETURN
1010 DATA 2,3,0
```

PC (GW-BASIC)

Change these lines:

```
40 CLS
50 LET MAG1=INT(RND*2)+1:LET MAG2=INT
(RND*2)+1
480 LOCATE Y+1,X+1:PRINT AS:RETURN
490 WHILE INKEYS<>" ":WEND:RETURN
1000 COLOR,T(C):RETURN
1010 DATA 0,4,1
```

ST(STOS)

Change or add these lines:

```
15 MODE 1:KEY OFF:CURS OFF:HIDE
40 PALETTE 80,$700,$807,$777:CLS
50 LET MAG1=INT(RND*2)+1:LET MAG2=INT
(RND*2)+1
480 LOCATE X,Y:PRINT AS:RETURN
490 WHILE INKEYS<>" ":WEND:RETURN
1000 PAPER T(C):RETURN
1010 DATA 0,1,2
```

Spectrum

Change or add these lines:

```
40 PAPER 7:CLS
50 LET MAG1=INT(RND*2)+1:LET MAG2=INT
(RND*2)+1
480 IF X>2 THEN PRINT AT Y,X-3;AS
485 RETURN
490 LET KS=INKEYS:IF KS<>" " THEN GOTO
490
495 RETURN
1000 PAPER T(C):RETURN
1010 DATA 7,2,1
```

Amstrad CPC

Change these lines:

```
40 MODE 1:INK 0,0:INK 2,6:INK 3,2:INK
1,26
50 LET MAG1=INT(RND*2)+1:LET MAG2=INT
(RND*2)+1
480 LOCATE X,Y:PRINT AS:RETURN
490 WHILE INKEYS<>" ":WEND:RETURN
1000 PAPER T(C):RETURN
1010 DATA 0,2,3
```

Commodore 64/128

Change these lines:

```
40 PRINT CHR$(147);
50 LET MAG1=INT(RND(0)*2)+1:LET MAG2=
INT(RND(0)*2)+1
480 POKE 211,X:POKE 214,Y:SYS 58732:PRI
NT AS:RETURN
490 GET KS:IF KS<>" " THEN GOTO 490
495 RETURN
1000 PRINT CHR$(18);CHR$(T(C));:RETURN
1010 DATA 144,28,31
```

NEXT MONTH we'll look at another computer model. We'll study the growth of a colony of bacteria. Ugh!

Your own logo disc or tape for £1!

IT'S PUZZLE TIME

Turtle graphics is a vital part of any Logo program. And that's what Turtle Logo is. Specially written for the Electron, BBC Micro and A3000/Archimedes series, it is on the tape or disc that comes with the Let's Compute! Club bumper pack.

You can find out how to join the Club on Page 28 - and about all the other goodies sent out to members.

However, if you only want Turtle Logo we'll send it to you for just £1 if you complete and return the coupon below



Tessa turtle is an expert at fitting shapes together. That's why she's called Tessa.

It's short for Tessellation. It's a fancy word maths experts use when they make a pattern from shapes.

Now Tessa's made a puzzle. It's just the four shapes shown below. The idea is to fit them together to make Tessa's initial - T.

Try it yourself! Cut out the shapes and see if you can arrange them into the letter T.



Can you draw an interesting, pattern or shape in Logo? If you can we'd love to see it. Post it to Let's Compute! Adlington Park, Macclesfield SK10 4NP. There's a super Let's Compute! baseball cap for the writer of every one we print.

Tessa gave the puzzle to Tubby. He couldn't do it at first. But he's a real wizz on his computer.

He worked out a Logo program that gives the answer. You can see it below.

If you can't solve Tessa's puzzle, just use Tubby's program. But first you need to run the Logo Language. This is available for most makes of home computer.

(If you haven't got Logo and you're using an Acorn computer the Let's Compute! Turtle Logo is an ideal starting point - see the offer on the left.)

Just type in Tubby's program. You can then discover the answer to the puzzle by entering:

TSHAPE 100



Tubby's program

```
TO TSHAPE :BIG
  HT RT 180
  FD :BIG RT 90
  FD :BIG LT 90
  FD :BIG * 2 RT 90
  FD :BIG RT 90
  FD :BIG * 2 LT 90
  REPEAT 20 FD :BIG RT 90
  FD :BIG * 3 RT 135
  FD :BIG * 28 / 10 RT 135
  FD :BIG LT 90
  FD :BIG * 5 / 10 RT 135
  FD :BIG * 14 / 10
END
```

ORDER FORM

Please send me the Let's Compute! Turtle Logo I enclose cheque, postal order or stamps the value of £1.

(Only suitable for Electron, BBC Micro or Archimedes series.)

Name

Address

Post code

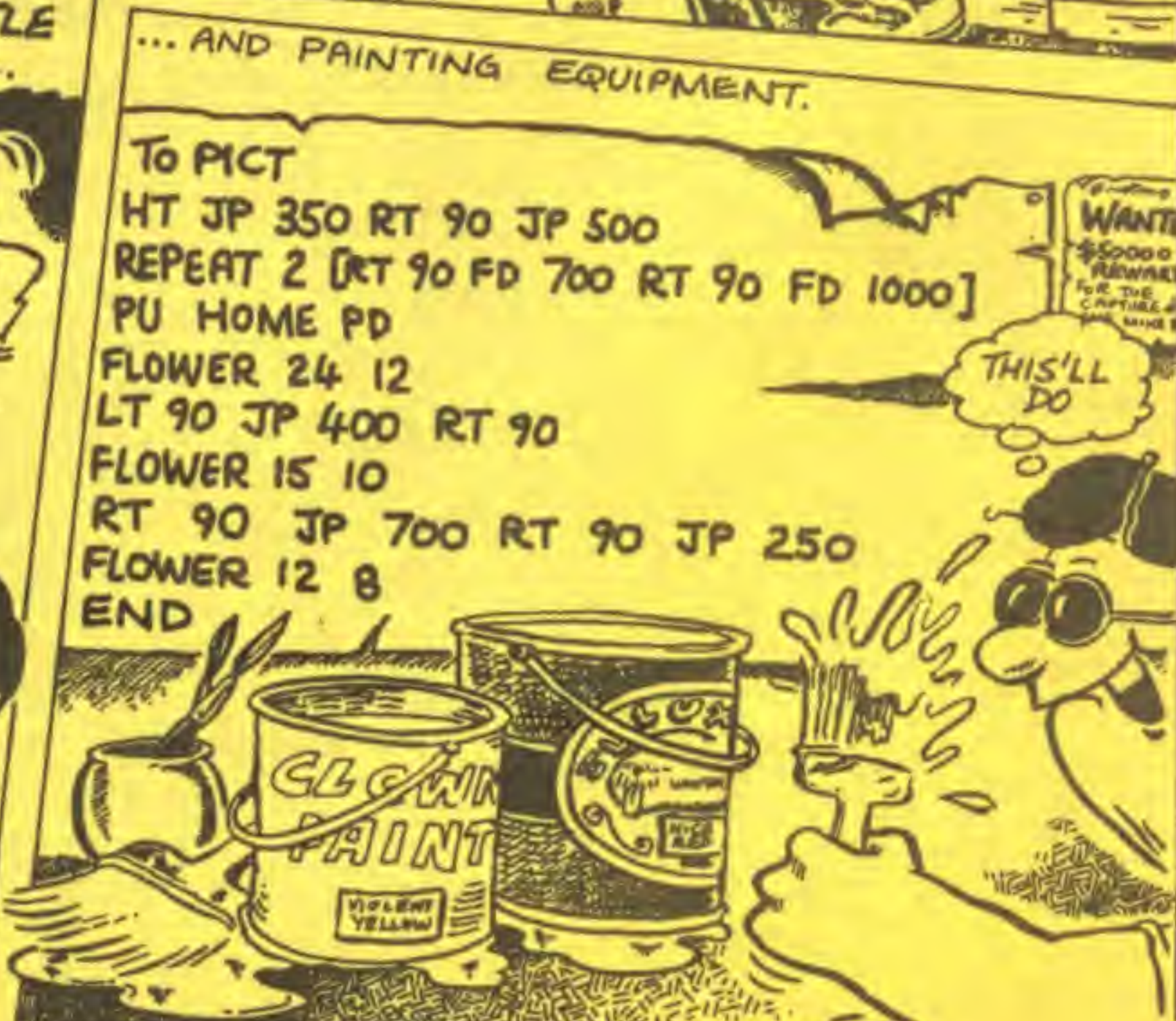
Age

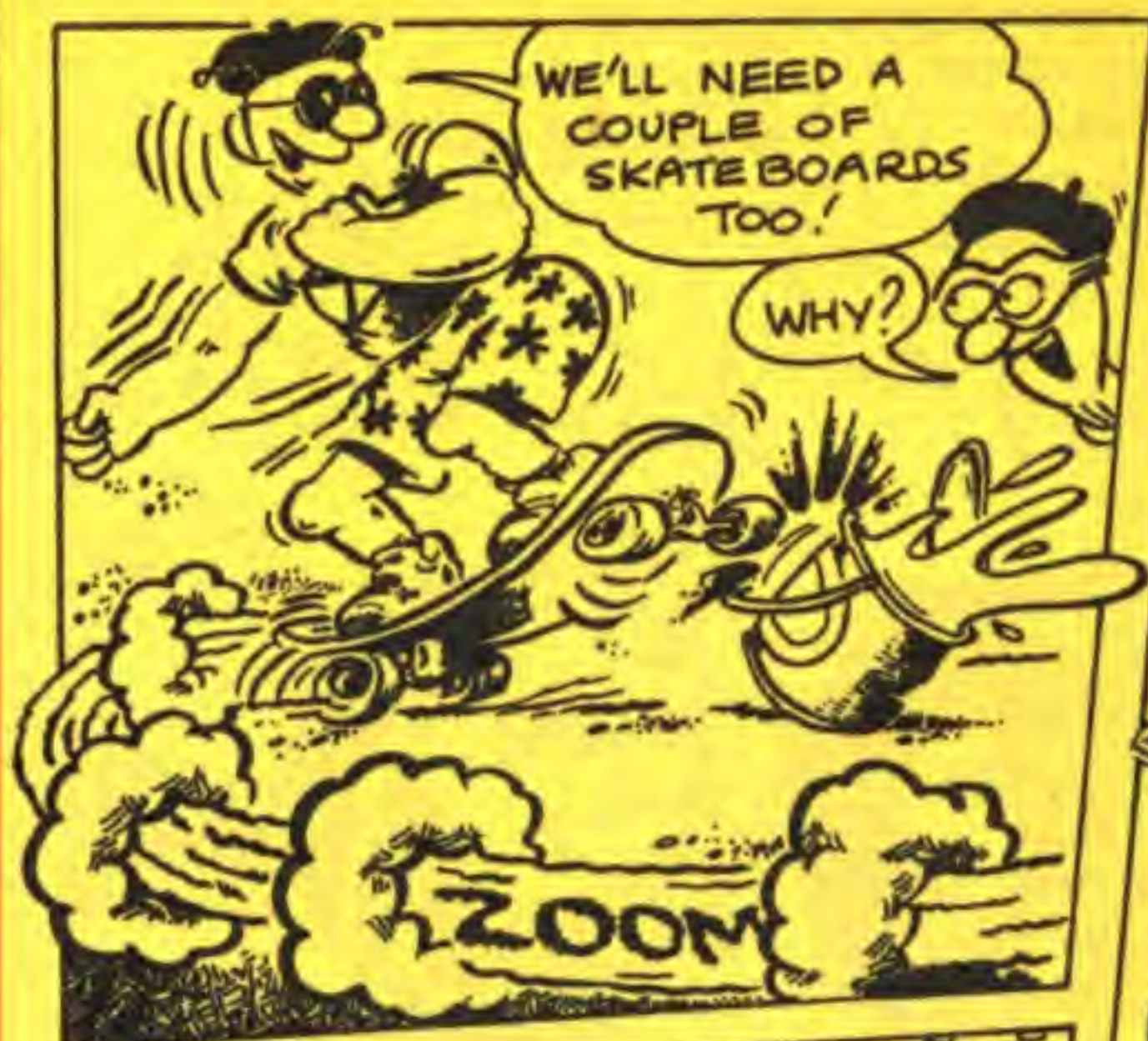
Please send it on:

- ☐ 5.25in 40T disc
- ☐ 5.25in 80T disc
- ☐ 3.5in disc
- ☐ Cassette

SEND TO:

Logo Offer,
Let's Compute!
Europe House
Adlington Park
Macclesfield
SK10 4NP

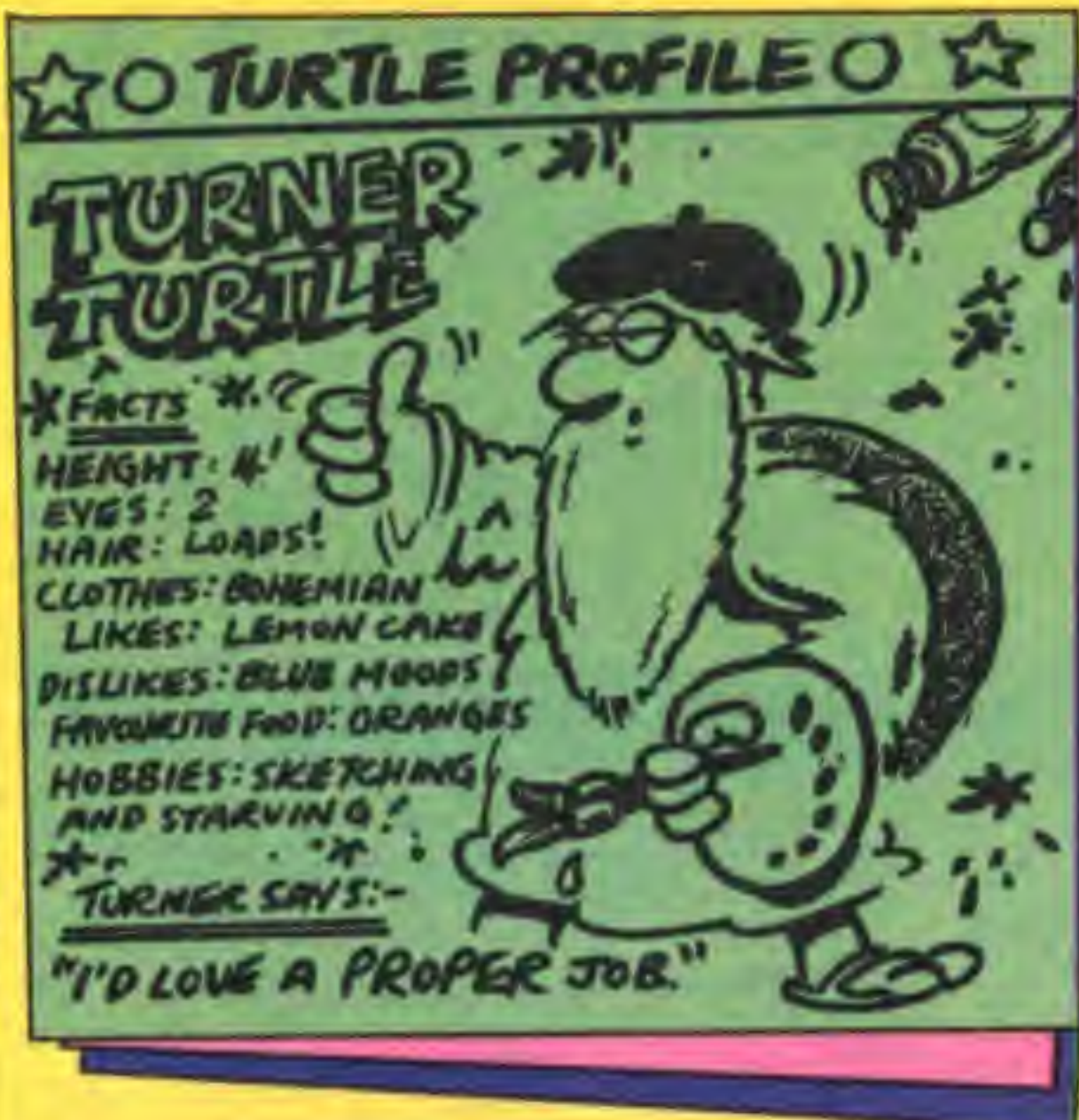




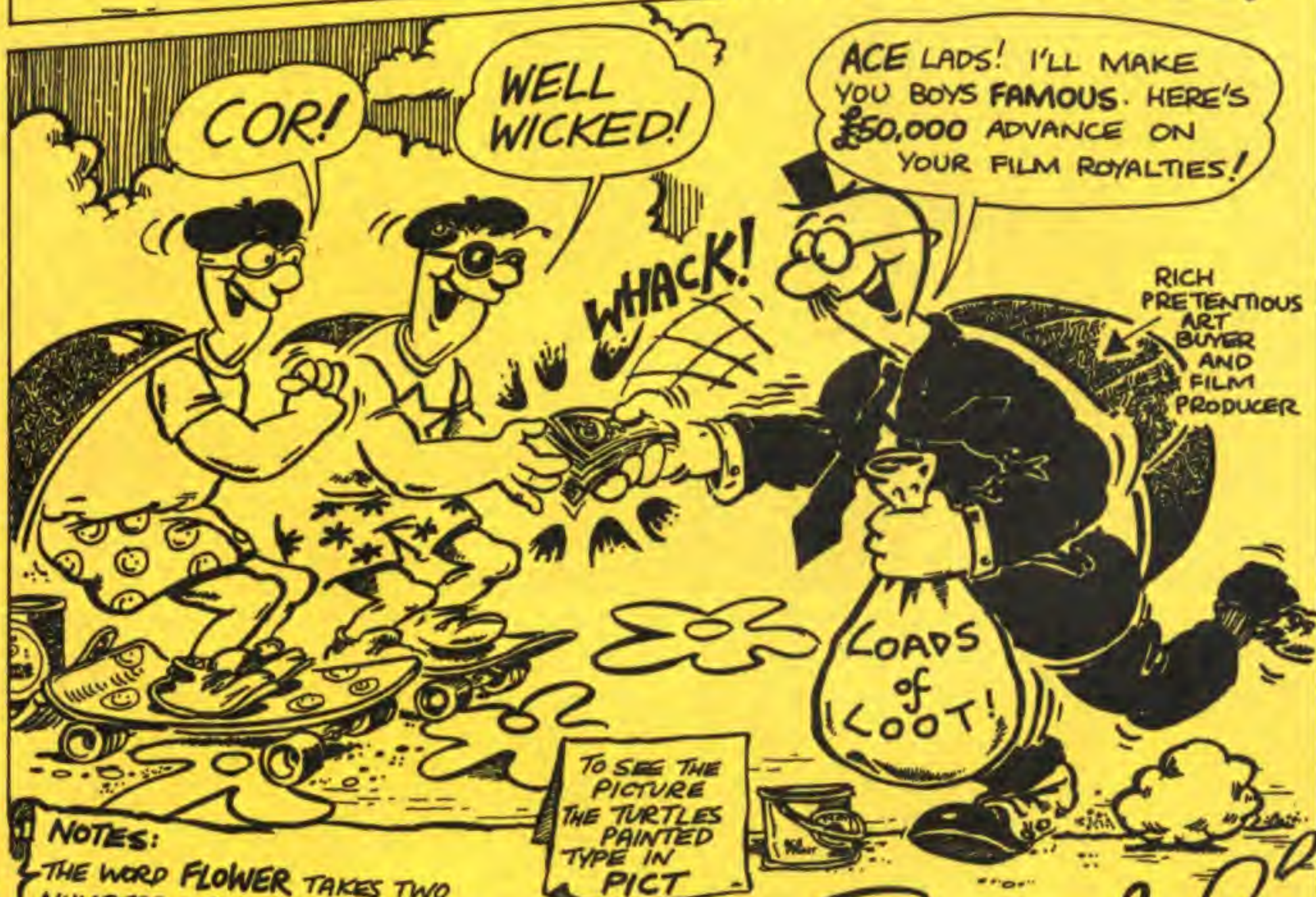
SUCCESS WAS SOON FOLLOWED BY...



```
TO PL :S :N
JP :S * 2 RT 90
REPEAT :N [FD :S RT 360 / :N FD :S]
RT 90 JP :S / 2 RT 180
END
```



... MEGA SUCCESS!



NOTES:

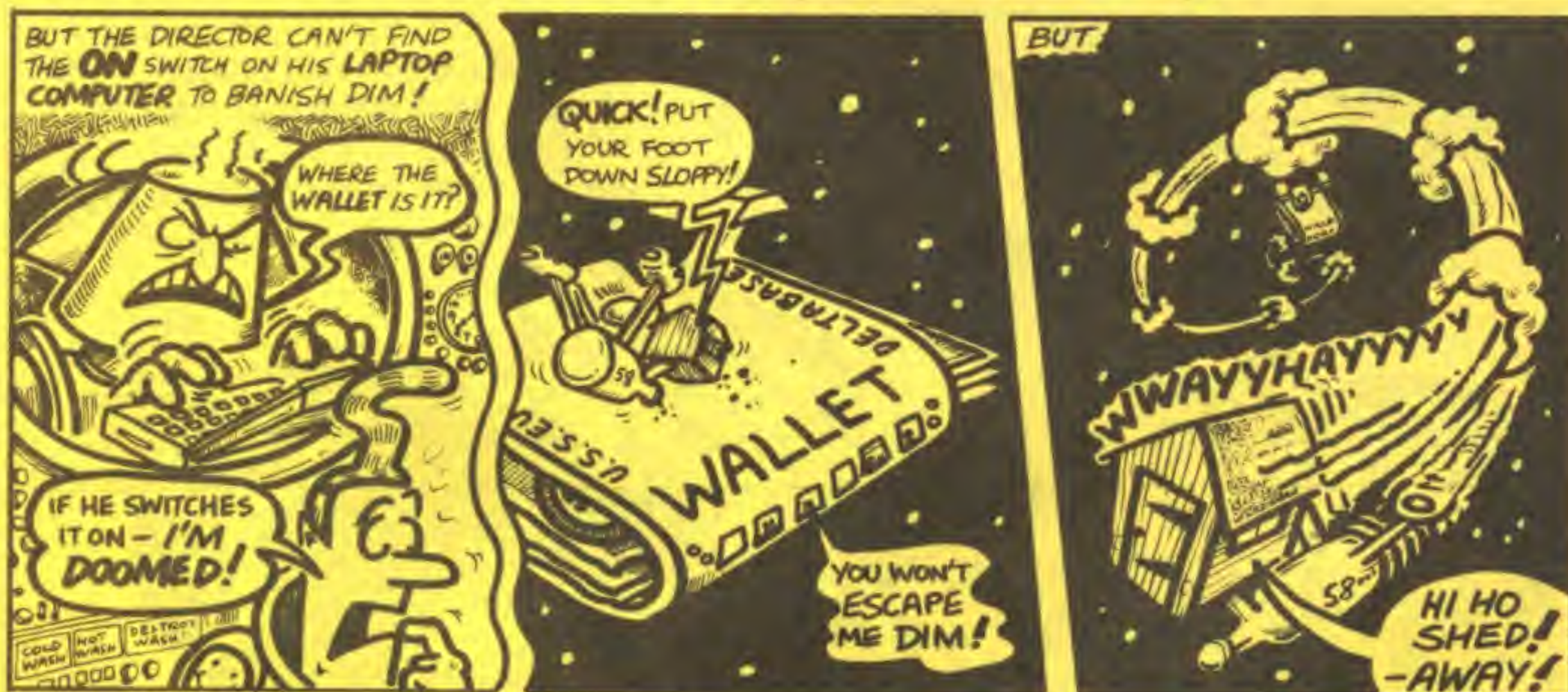
THE WORD **FLOWER** TAKES TWO NUMBERS - EXPERIMENT WITH THEM.

IF YOU'RE USING **TURTLE LOGO** REPLACE **REPEAT** WITH **REP** SO THAT IT WILL FIT ON ONE LINE

THE VARIABLES ARE **S** (SIZE) AND **N** (NUMBER OF LINES DRAWN FOR A PETAL)

NEXT MONTH
THE "TURTLES"
JOIN
"THE ARCHERS!"

FIRST THE LEFT EAR. THEN THE RIGHT EAR, AND NOW
THE FINAL FRONT-EAR



ONLY available to *Let's Compute!* readers
- five Bug Hunter
+ Bug Hunter
in Space packs
must be won!

BE A BUG HUNTER!

BugHunter has made quite a name for himself.

He keeps the Archimedes free of all sorts nasties and creepy crawlies.

Now *Let's Compute!* is offering five readers a chance to win a copy of **BOTH** of his adventures.

Bug Hunter was his first adventure. It features a very special hero called Hysteron Proteron.

Genetic scientists decided to produce an incredibly strong, intelligent and loyal super soldier. But something went wrong!

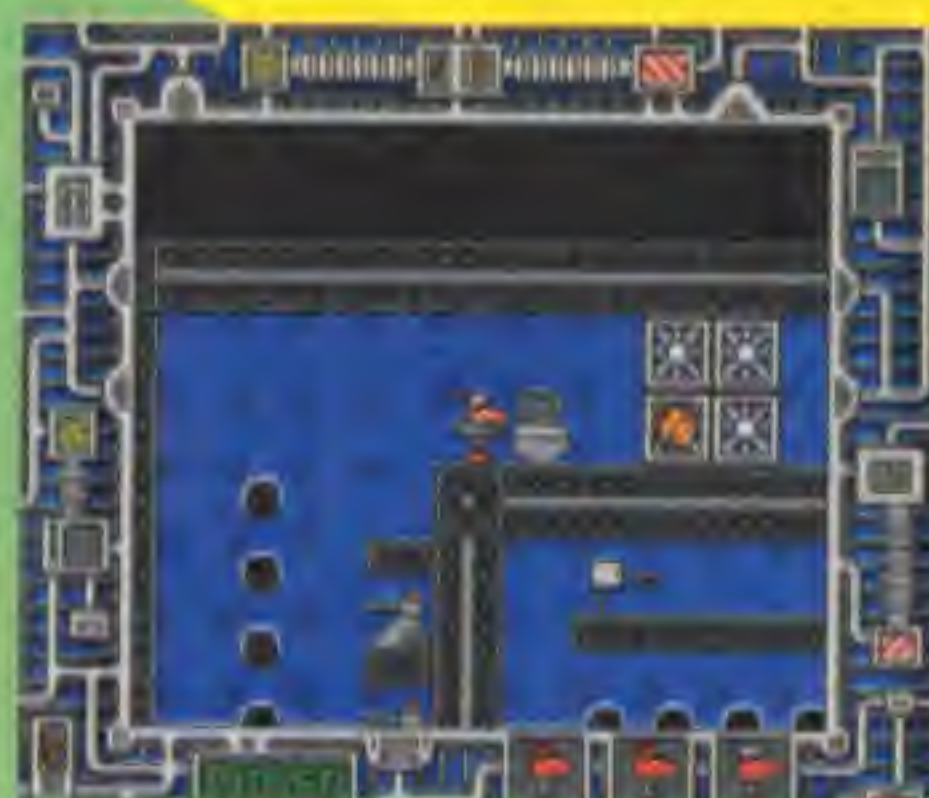
The result was a six inch two-legged creature. He has a big mouth and a hatred for insects.

He has sticky feet allowing him to walk upside down. He can leap high into the air to get past obstacles. And he can lift all sorts of strange objects to destroy the bugs he meets.

Bug Hunter in Space took our hero on a very special mission. After proving himself on earth, he is needed to prevent an alien invasion of bugs from outer space. He must visit each ship and switch off its engines. Then he has to dispose of all the aliens and make each ship self-destruct.

With larger areas to explore than in his original adventure there are even more difficult puzzles to solve. The bugs are very different too. They are the most evil creatures you could ever dread to meet!

Both of these brilliant games could be yours if you can answer the four simple questions on this page.



The Questions

1 How many legs do spiders have?

- A. Six
- B. Eight
- C. Four

3 A Black Widow is a kind of:

- A. Spider
- B. Fly
- C. Snake

2 A ladybirds' favourite food is:

- A. Leaves
- B. Aphids
- C. Flowers

4 What do you call a group of bees?

- A. Plague
- B. Swarm
- C. Coven

Now complete the entry form and send it to us at *Let's Compute!* to arrive no later than May 31.

Entry Form

Name

Address

Postcode Age

Answers

- 1
- 2
- 3
- 4

My computer is a: ☐ BBC A3000 ☐ Archimedes

Send to: BugHunter Contest, Let's Compute! Europa House, Adlington Park, Macclesfield SK10 4NP.

SOFTWARE CITY

Unit 4, B.D.C, 21 Temple Street, Wolverhampton WV2 4AN. Tel: 0902 25304

BBC/ELECTRON FULL PRICE

		CASS	DISC 5 1/4	DISC 3 1/2
ARCADE SOCCER	BB/EL	7.99	7.99	10.99
BRIAN CLOUGH	BB/EL	7.99	8.99	N/A
COLOSSUS CHESS 4	BB/EL	7.99	10.99	N/A
E-TYPE	BB/EL	7.99	10.99	N/A
ELITE	BB/EL	9.99	10.99	14.99
EXILE	BB	9.99	10.99	14.99
FOOTBALL DIRECTOR	BB	7.99	9.99	N/A
FUN SCHOOL 3 (U.5'S)	BB	9.99	12.99	N/A
FUN SCHOOL 3 (5-7)	BB	9.99	12.99	N/A
FUN SCHOOL 3 (7+)	BB	9.99	12.99	N/A
HELTER SKELTER	BB/EL	8.50	10.99	N/A
HOLED OUT	BB/EL	9.99	10.99	11.99
HOLED OUT EXTRA VOL 1	BB/EL	7.99	9.99	9.99
HOLED OUT EXTRA VOL 2	BB/EL	7.99	9.99	9.99
HOTAGES	BB/EL	7.99	9.99	9.99
INERTIA (NEW)	BB/EL	7.99	9.99	9.99
LAST NINJA 2	BB/EL	7.99	9.99	9.99
LICENCE TO KILL	BB	9.99	10.99	N/A
MASTER BREAK	BB/EL	7.99	9.99	10.99
MINI OFFICE 2	BB	10.99	N/A	N/A
MINI OFFICE 2 (40 TRACK)	BB	N/A	12.99	14.99
MINI OFFICE 2 (80 TRACK)	BB	N/A	12.99	14.99
NEVRYON	BB	N/A	10.99	11.99
PERPLEXITY	BB/EL	7.99	9.99	10.99
QUESTION OF SPORT	BB	9.99	10.99	14.99
REPTON/INFINITY	BB/EL	9.99	10.99	14.99
RICOCHET	BB/EL	7.99	9.99	10.99
SIM CITY	BB/EL	9.99	10.99	14.99
SPEECH	BB	7.99	9.99	10.99
TRIVIAL PURSUIT-GENUS	BB	10.99	14.99	N/A
U.I.M.	BB	N/A	14.99	15.99
WHITE MAGIC 1 OR 2	BB/EL	7.99	9.99	10.99

BBC/ELECTRON BUDGET CASSETTES

3-D DOTTY	BB/EL	1.99	LEAGUE CHALLENGE	BB/EL	2.99
3-D SNOOKER	BB	2.99	LIFE OF REPTON	BB/EL	2.99
ARKANOID	BB	2.99	LIVING DAYLIGHTS	BB	2.99
BARBARIAN	BB	2.99	MINI OFFICE	BB/EL	2.99
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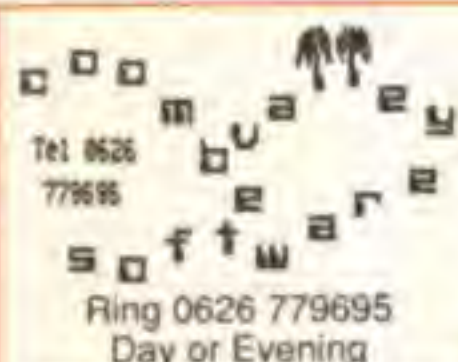
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PRIZE WINNERS

ALTERNATIVE PRIZES

In the March issue of *Let's Compute!* we offered 60 Alternative games. We received loads of entries with the correct answer - Mad as a March hare.

The following are the lucky winners:

Copies of **Count Duckula** are winging their way to: Damien Terry, St Athan Bafry; Peter McKeon, Upton; Vicky Rees, Barry; Stephen Worion, Middlesbrough; Simon Brambley, Grimsby; Adam Kendal, Latimer; Kathy McFarlane, Dundonald; Simon Tuddenham, Dorney; S Weightman, Feltham; Jessica Davies, Maidenhead and Stewart Sharp, Glastonbury.

Copies of the sea adventure **Jaws** go to: C Carey, Bexhill; James Brand, Harrogate; Paul Champion, Worthing; Christopher Blackhurst, Nantwich; Aleksander Dragnes, Putney; Michael Chappell, Cheltenham; J Stuart, Maybole; Michael Jones, Quinton; Martin Dean, Nantwich; Adrian Dingee, Alton; Scott Simpson, Newtonhill; Raymond, Cardiff; Richard Hinet, Walsall and Joe Well, Brookmans Park.

On a sporting theme copies of **Track Suit Manager** go to: Mark Smith, Ipswich; Paul Honsley, Parkgate; John E Collins, Whitley Bay; Robert Shaw, Dallon; Kathryn Bayne, Warrington; Kate Bowman, Worcester Park; R

Boulton, Gleaston; Luke Saunders, Wanstead; Mark Burrows, Wisbech; Steven Dobson, Co Durham; Paul Kaen, Bassacat; Richard Taplay, Wokingham; Marc Epstein, London.

Thomas the Tank Engine will find welcome homes with: Richard Outhwaite, Solihull; Andrew Peatling, Hewish; L Huckle, Burghfield Common; Michael Bayliss, Porthill; Mathew B, Guimington; Andrew Johnson, Isle Of Harris; Andrew Oakes, Crewe; Karl Scovell, Nottingham; Taranjit Bahra, Handsworth; James Munce, Southampton and Matthew Leonard, South Harrow.

Sooty's Fun with Numbers will soon be challenging: Paul Darnbrough, Sutton Park; Gill Ford, Watford; R Springett, Clapham; Lisa Corbett-Wilson, North Mundham; Christopher Key, Grimsby; Jamey Day, Old Marston; Shane Kelly, Co Derry; Tim Phillips, Burnham-On-Sea; James Town, Wallington; Sarah Miller, Watten Wick and Paula Gower from Hastings.

HOMES FOR MICE

Ten lucky winners of the Beebug Contest will be able to rehouse their mice. A comfortable home, cover and mat are on the way to: J Tanner, Charlton; Paul Moore, Helton-le-Hole; Douglas Freeman, Monmouth; Martin

Critchell, Alton Pancras; Kathryn Balaam, Hitchin; Richard Ward, Crawley; Kathryn Warren, Chester-le-Street; K Palmer, Tonyrefail; Andrew Wright, Northallerton and Lee Ganfield, Frinton-on-Sea.

HIGH SCORE CHALLENGE!

Game	Computer	Score	Name	Age
Advanced Pinball	C64	36,385	David Yu	12
Alterburner	ST	11,703,990	Simon Bramley	11
After Burner	CPC	21,000,370	Isaac Griffiths	12
Atic-Attack	BBC	6,790	Ed Rimshaw	12
Barbarian II	Electron	40,945	Scott Latham	12
Beach Head	Electron	107,125	Kenneth Rolt	15
BirdBats	BBC	123,500	Rowley Osborn	10
Bombjack	ST	361,630	Karen Morris	11
Buggy Boy	Amiga	80,000,070,507	Shalick Khoudabuz	11
Bug Hunter II	Archimedes	7115	James Watson	10
Carousel	BBC	12,590	Chris Ball	10
Caveman Capers	BBC	40,120	Gareth Corbell	12
Checks Away	Archimedes	4,080	Christian Webb	12
Chuckie Egg	Electron	7,347,110	Royston Palin	10
Crazee Rider	BBC	18,500	Sean Betts	10
3D Pinball	C64	36,030	Nicholas Goodwin	13
Digger	PC	73,125	Andrew Oakey	12
Double Dragon II	Spectrum	294,234	Lee McShane	12

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Isari Warrior	Amiga	519,000	Peter Clifton	11
Invaders	CPC	181,058	Lisa Gonzalez	9
Italy 90	C64	1,754	Robert Black	15
Klax	BBC	147,025	Hamish Lockie	10
Marlian Attack	BBC	12,250	Matthew Jack	8
Newryon	Archimedes	23,890	Jon Aldridge	11
Outrun	PC	8,884,650	Gareth Owen	10
Plumb Looney	BBC	189,425	Vicky Joyce	12
Powerdrift	ST	1,167,882	James Banks	10
Rocket Raid	BBC	21,940	Stephen Sheard	12
SimCity	Amiga	741	David Alderton	11
Skirmish	Electron	124,700	Matthew Lee	14
Snake	CPC	469	Rachel Cattell	9
Spy Hunter	Archimedes	146,573	Lalith Vin	12
Swoop	Electron	12,820	Martin Dean	13
Test Drive	Amiga	108,375	John King	11
Transistor Rev	BBC	65,300	Adam Briffett	8

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Chocks Away Mark II Version was awarded **GAME OF THE YEAR 1990** by Acorn User, A&B Computing (now Archimedes World), RISC User & Micronet. "Graphics in the game are superb, smooth and with plenty of ground detail... this is a really enthralling flight simulator with plenty of variation and features to ensure longevity." RISC User, Dec '90
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CHOCKS AWAY EXTRA MISSIONS

This consists of a new manual and a disc containing an additional 26 missions (6 of which are reconnaissance missions). It is loosely based on the original Chocks Away and features an extensive range of extra features and improvements. To run it, you will require the MkII version of the original Chocks Away. Extra features include:

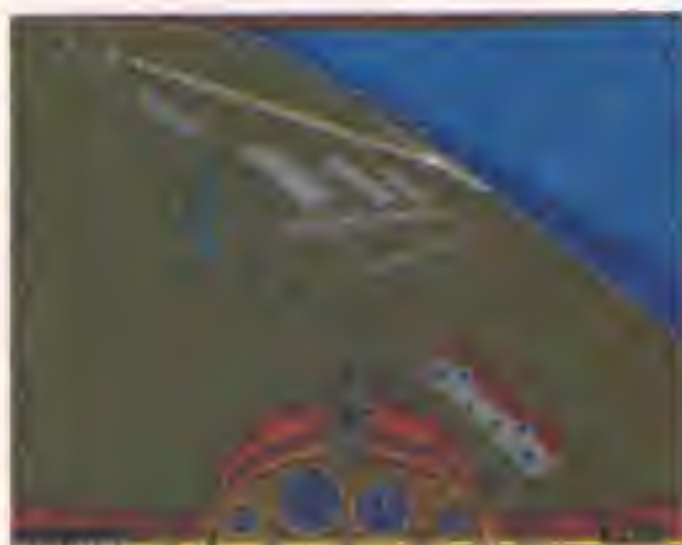
- 16 new & detailed maps based over land and sea.
- 20 enemy planes and 20 enemy targets are included in each mission. Over 1000 extra targets and planes have been carefully defined.
- Considerably improved action on all missions with plenty of targets to shoot at and plenty shooting at you.
- You can view the action from any of the enemy planes or targets and your own control tower at any time even while still controlling your own plane or watching a saved flight. There is a selection of tracking cameras (with adjustable zoom lenses!) around the playing arena. In addition a phantom plane can also be selected to follow the action on any of your black box flight recordings.
- Improved enemy pilots capable of performing loops, rolls, stall turns etc. All enemy planes are carefully modelled using the same equations controlling your own plane. This ensures both an accurate and fair simulation.

- More enemy planes and targets to shoot including: Three Engine Fighters, Enormous Cargo Planes, Airships, Barrage Balloons, Gun Boats, Oil Tankers, Trains etc.
- Six reconnaissance missions where you are required to take photos of various installations with your new on board camera.
- Improved graphics over the 16 maps including Complex Cities, Houses, Railways, Roads, Rivers, Bridges, Lampposts, Railway Stations, Oil rigs, Piers, Beaches, etc. to mention but a few. In total over 100 different graphics have been defined.
- Serial Port Link Up option so that you can link up 2 BBC A3000 or Archimedes computers and 2 pilots can fly simultaneously in full screen mode.
- Extensive enemy flak guns and improved enemy plane guns help make the new missions both more interesting and challenging to say the least!
- Improved digitised sound effects plus, of course, all the extensive options which are available with the original Chocks Away.

WIN a superb..... "Radio-Controlled Biplane"

Successful completion of all 6 Reconnaissance missions will allow you to enter this competition

TALLY HO GINGER!



ARCHIMEDES & BBC A3000

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CHOCKS AWAY (Mark II Version with 1 or {split screen} 2 player options)	£24.95
CHOCKS AWAY EXTRA MISSIONS (With 2 player Serial link option)	£19.95
CHOCKS AWAY COMPENDIUM (Chocks Away & the Extra Missions)	£39.95
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